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**MEDICAL AND CHIRURGICAL FACULTY  
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# Maryland

## STATE MEDICAL JOURNAL

VOL. 8 NO. 3

MARCH, 1959

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ANNUAL MEETING—WEDNESDAY, THURSDAY, FRIDAY, APRIL 15, 16, 17, 1959

#### **IN THREATENED AND HABITUAL ABORTION:**

"...high-potency progestational agents [such as NORLUTIN] frequently have the power, when administered in adequate dosage, to arrest and suspend myometrial contractions incident to spontaneous abortion."\* This is the conclusion of a group of investigators who studied patients with threatened (and in some cases habitual) abortion. The study group was compared with a control group which was treated with bed rest and mild sedation only. In this control group, the salvage rate was 15.5 per cent. In the group receiving NORLUTIN, 19 of 45 pregnancies were continued—a salvage rate of 42.2 per cent

#### **PREGNANCY SALVAGE WITH NORLUTIN**

|                                    | Control Group<br>(Treated with<br>bed rest and<br>mild sedation) | Study Group<br>(Treated with<br>NORLUTIN) |
|------------------------------------|--|---|
| Total number of pregnancies        | 297  | 45  |
| Number of pregnancies salvaged     | 46   | 19  |
| Percentage of pregnancies salvaged | 15.5%  | 42.2%                                     |

Adapted from Hodgkinson *et al.*\*

**Indications for NORLUTIN:** Conditions involving deficiency of progesterone, such as primary and secondary amenorrhea, menstrual irregularity, functional uterine bleeding, endocrine infertility, habitual abortion, threatened abortion, premenstrual tension, and dysmenorrhea.

**Packaging:** 5-mg. scored tablets, bottles of 30.

\*Hodgkinson, C. P.; Igna, E. J., & Bukeavich, A. P.: *Ann. New York Acad. Sci.* 71:753 1958.



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# Maryland STATE MEDICAL JOURNAL

*Medical and Chirurgical Faculty of the State of Maryland*

VOLUME 8

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## ANNUAL MEETING—APRIL 15, 16, 17, 1959 MEDICAL AND CHIRURGICAL FACULTY

Another educational and interesting program has been set up by the Committee on Scientific Work and Arrangements for the Annual Meeting of the Medical and Chirurgical Faculty on Wednesday, Thursday, and Friday, April 15, 16, and 17, at the Alcazar, Cathedral and Madison Streets, Baltimore. Twelve hours of Study Course Credit will be given by the American Academy of General Practice for attendance at the scientific sessions.

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PLAN YOUR SCHEDULE EARLY SO THAT YOU WILL BE ABLE TO ATTEND  
THE ANNUAL MEETING, APRIL 15, 16, 17!

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### SCIENTIFIC SESSIONS

The Alcazar, Cathedral and Madison Streets, Baltimore

#### WEDNESDAY, APRIL 15, 1959

- 2:15 p.m. Surgical Treatment of Aortic Valvular Disease. Charles A. Hufnagel, M.D., Washington, D. C.
- 2:45 p.m. Leukemia: Present Status. William Dameshek, M.D., Boston.
- 3:30 p.m. The Surgical Treatment of Chronic Pancreatitis. Ralph F. Bowers, M.D., Memphis. (J. M. T. Finney Fund Lecture.)
- 4:10 p.m. Atherogenesis and Lipid Metabolism. Chas. F. Wilkinson, Jr., M.D., New York City.

#### WEDNESDAY EVENING

- 8:30 p.m. Whiplash Injuries. A Conference Between the Counsel and Medical Witnesses. (Medicolegal Symposium.)  
Moderator—George McLean, M.D., Baltimore.  
Medical Witnesses—James G. Arnold, Jr., M.D., Baltimore, and Howard F. Kinnamon, M.D., Easton.  
Counsel—Hamilton O'Dunne, Esquire, Baltimore.

**THURSDAY, APRIL 16, 1959**

- 9:30 a.m. The Old-Age and Survivors Insurance Disability Program. Maurice D. Dewberry, Charlottesville, Va.
- 10:00 a.m. Staphylococcal Infections in the Antibiotic Era. Horace L. Hodes, M.D., New York City. (William Royal Stokes Memorial Lecture.)
- 10:40 a.m. Necrology. A. S. Chalfant, M.D., Baltimore.
- 10:50 a.m. Election of the Board of Medical Examiners.
- 11:10 a.m. Adrenocortical Steroid Therapy. A Panel Discussion.  
Lawrence E. Shulman, M.D., Baltimore.  
Ivan L. Bennett, Jr., M.D., Baltimore.  
Evan Calkins, M.D., Boston.  
Lawson Wilkins, M.D., Baltimore.
- 12:30 p.m. **ROUND TABLE LUNCHEON.** Park Plaza Hotel, Charles and Madison Streets. There will be 25 tables with moderators on subjects of interest to everyone. A list of these will be mailed to members early in April.
- 2:15 p.m. Surgical Lesions of the Adrenal Glands. James T. Priestley, M.D., Mayo Clinic. (I. Ridgeway Trimble Fund Lecture.)
- 2:55 p.m. The Natural History of Arteriosclerosis Obliterans. Edgar V. Allen, M.D., Mayo Clinic.
- 3:45 p.m. Therapeutic Uses of Radioiodine. A Panel Discussion.  
Samuel P. Asper, Jr., M.D., Baltimore.  
Herrman L. Blumgart, M.D., Boston.  
Joseph E. Rall, M.D., Bethesda.

**THURSDAY EVENING****PRESIDENTIAL DINNER—SHERATON BELVEDERE HOTEL**

The Presidential Dinner will again be held in the Charles Room of the Sheraton Belvedere Hotel at 7:00 p.m., on Thursday evening, April 16. Cocktails will be served at 6:00 p.m. in the Jubilee Room.

The Dinner will be followed by the General Meeting at 8:15 p.m. in the Charles Room. The guest speaker at this meeting will be Milton S. Eisenhower, President of The Johns Hopkins University. *All* members are invited to the General Meeting, even though they do not attend the dinner.

**FRIDAY, APRIL 17, 1959**

- 9:20 a.m. Respiratory Resuscitation Techniques. A sound film on an experimental study by Peter Safar, M.D., Baltimore.
- 10:00 a.m. Clinical Pathological Conference. Harlan I. Firminger, M.D., Baltimore, and Theodore E. Woodward, M.D., Baltimore.
- 11:15 a.m. Renal Calculous Disease—Metabolic and Clinical Aspects. Thomas B. Connor, M.D., Baltimore.
- 11:45 a.m. Will you Be Caught With Your Economics Down? William Alan Richardson, President, Medical Economics, Oradell, N. J.



### EXHIBITS

There will be approximately 58 technical exhibits in the Ballroom of the Alcazar. It will be worthwhile for everyone to plan to spend time visiting these exhibits.

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### BUSINESS SESSIONS

The Council of the Medical and Chirurgical Faculty will meet at the Alcazar on Wednesday morning, April 15. This will be followed by the meeting of the House of Delegates also at the Alcazar. The second meeting of the House of Delegates will be held on Friday afternoon, April 17, at the Alcazar. All members of the Society are invited to attend the meetings of the House of Delegates, but only the delegates have the privilege of the floor.

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### AUXILIARY LUNCHEON

The Woman's Auxiliary to the Medical and Chirurgical Faculty will hold its annual luncheon at the Sheraton Belvedere Hotel on Wednesday, April 15. All members of the Medical and Chirurgical Faculty, their wives and guests are invited to attend this luncheon.

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### BLUE ROOM—THE ALCAZAR

As an innovation this year we have arranged for a relaxation area, which will be located in the Blue Room of the Alcazar. Also in this room will be telephones, rest rooms, and office space, as well as a display from your Medical and Chirurgical Faculty Library, where books may be read, borrowed, returned, and bibliographies requested.

SEMIANNUAL MEETING  
FRIDAY, SEPTEMBER 18, 1959  
OCEAN CITY, MARYLAND

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1960 ANNUAL MEETING  
Wednesday, Thursday, Friday, APRIL 20, 21, 22, 1960  
BALTIMORE

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## EDITORIAL

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### FREE CHOICE OF PHYSICIANS

J. SHELDON EASTLAND, M.D.

A great deal of controversy has arisen over medicine's long-standing belief that a person seeking medical care should be free to choose his own physician. While the conflict has been restricted to relatively few areas, its outcome may set a pattern for the whole country.

Arguments raised by those opposed to the free choice principle are these: 1. The individual cannot appraise the quality of physicians; thus he is unable to exercise this privilege intelligently. 2. Financing mechanisms have so altered the physician-patient relationship that traditional concepts no longer apply. 3. Existing legal and professional controls are not sufficient to protect the patient from unethical, incompetent or overcharging physicians.

Furthermore, some prefer collective, rather than individual, responsibility for health maintenance.

Conflict has developed primarily where management, union or "consumer-sponsored" medical care plans do not permit free choice.

That the ideal of the individual's free choice of physician will be abolished is unlikely. Americans generally have strong opinions—whether on the subject of cars, ball clubs, politics or doctors—and most of them are used to directing their own lives accordingly. The basic concept of free choice is not corrupted because such conflicting plans do and will continue to exist, however. An ideal is not compromised because of difficulties encountered in trying to reach it. We can cling tenaciously to the traditional ideal, yet still recognize deviations from it under certain circumstances.

What we in the medical profession must do is to understand clearly *why* free choice is most desirable and then win others to our point of view.

To a physician free choice means the challenge of the open market, the incentive of competitive selection, the chance to succeed based on the judgments of many individual consumers, and the opportunity to develop a relationship with the patient undisturbed by outside forces of uncertain motivation. To the patient this concept means the privilege of personal choice in an area affecting his life and health; the right to change physicians and control of the service by he who receives and pays for such service.

Our obligation is to recognize the self-policing responsibility that is a condition of freedom, and at the same time fortify the inclination of patients to preserve their right to choose. Finally, we must convince the third party vendors of medical care that the right of free choice should be protected.

*Medical Arts Building  
Baltimore 1, Maryland*

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## YOUR MEDICAL FACULTY AT WORK

JOHN SARGEANT, *Executive Secretary*

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The Council of the Medical and Chirurgical Faculty of Maryland met on Tuesday, January 20, at the Faculty building and took the following action:

1. Authorized installation of a radio by civil defense authorities in the Faculty building for use in the event of a natural or civil disaster—the radio is to be manned by volunteer “hams.”

2. Created a new committee for the purpose of studying:

Health insurance for those of the public over age 65 as recommended by the AMA House of Delegates

Free choice of physicians and closed panel practice of medicine

Forand Bill

Any other aspects of the economic side of the practice of medicine

The committee will make its report to the Council within 60 days.

3. Voted to recommend emeritus membership to the House of Delegates for:

Alan M. Chesney, M.D., member 37 years

Michael A. Abrams, M.D., member 47 years

Waitman F. Zinn, M.D., member 47 years

4. Voted to grant 50 year membership to:

William D. Campbell, M.D., Hagerstown

T. Frederick Leitz, M.D., Baltimore

Walter D. Wise, M.D., Baltimore

5. Approved use of a display on the AMA's Six Point Positive Program for the Aging, at the April annual Faculty meeting.

6. Authorized the chairman of the Resolutions Committee to prepare a resolution for presentation

to the House of Delegates recommending annual reregistration of physicians in Maryland.

7. Approved the recommendation of the Veterans Medical Care Committee in accepting the fee schedule for Home Town Veterans Medical Care, as authorized by the V.A.

8. Endorsed the dispatch of a letter to all hospitals in Maryland and to the Council on Medical Education and Hospitals, letter suggesting:

a. Formation of a local committee to be called into consultation before accreditation of a hospital is withdrawn

b. That the signature of a physician on the front sheet of the patient's chart be an endorsement of the contents rather than requiring signature to the various component parts of the charts.

9. Approved the 1959 budget as recommended by the Committee on Finance and Budget. This is presented to the House of Delegates at the Annual Meeting for information purposes.

10. Approved in principle a higher fee for specialists and authorized the Executive Committee to work out criteria for all specialists for recommendation to the Council. (This was in reply to a request from Blue Shield in this regard.)

11. Declined to provide an answer to Blue Shield-Blue Cross regarding the manner in which diagnostic services should be provided until advice was available as to under which contract such services would be rendered.

12. Authorized the president to send a letter to the Talbot County Humane Society commending it for its action in sending unwanted strays to the NIH, Bethesda, for research purposes.

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## LECTURESHIPS

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### A CONCEPT OF PATHOGENESIS OF GASTRIC AND DUODENAL ULCER

LESTER R. DRAGSTEDT, M.D., Ph.D.\*

DR. EASTLAND: The Medical and Chirurgical Faculty is most fortunate in having several available funds which are used for lectureships. Tonight it is our privilege to have the I. Ridgeway Trimble lecture. This lectureship was established by contributions of friends and patients of Dr. Trimble. The first lecture was in 1913. I have a list of the past lecturers and it is an outstanding list of men in the field of medicine in its broad sense. I am not going to read them all, but I do think I should mention a few of the people who have been with us. Our first speaker in 1913 was Dr. Simon Flexner. In 1916 we had Dr. W. C. Gorgas. In 1921, Dr. G. W. Crile, Sr.; in 1926, Dr. George F. Dick; Dr. Russell Wilder in 1937; in 1940, Dr. Elliott Joslin; 1941, Dr. Robert H. Ivy. As you see, the fund is used for lectureships not only in surgery, but medicine in allied fields. It is one of our outstanding lectureships. Tonight we have the privilege of having the late Dr. Trimble's son with us. I am going to ask Dr. I. Ridgeway Trimble to introduce our speaker this evening.

DR. I. RIDGEWAY TRIMBLE: Thank you, Dr. Eastland, for the great privilege of introducing my good friend Lester Dragstedt. Many of us know him; all of us have heard of him. We are indebted to Dr. Norman Freeman and his committee for persuading Dr. Dragstedt to come here; particularly to Dr. William Grose who was so interested in having Dr. Dragstedt come. There is no one that I would rather have as lecturer for this lectureship given in the name of my father than Lester Dragstedt.

You may not know—I didn't until I looked it up—that Dr. Dragstedt was not born in Chicago. He was born in Anaconda, Mont., a mining town. I presume he has a number of copper mines and gold mines; that is why he is able to stay on full time at the University of Chicago.

His bibliography is a very large one. There are some people who hear of discoveries, there are some who tell about discoveries, and there are some who judge discoveries, but among the very rare few there are some who make discoveries. Dr. Lester Dragstedt is among that very few, so it gives me great pleasure to introduce him to this audience.

DR. DRAGSTEDT: Thank you, Dr. Trimble, Dr. Eastland, Ladies and Gentlemen: I am highly honored by this invitation to give the Trimble Lecture. I did not know Dr. Trimble, but I was greatly moved by reading the beautiful statements of Dr. Wise and Dr. Thayer. I am happy indeed to add my tribute to this really great man and great surgeon.

I have chosen to talk to you this evening about a view of the cause of gastric and duodenal ulcer. It seems to me as I survey the studies of the past 20 years that the old idea that these lesions are due to the digestant action of the gastric content or gastric juice has been widely accepted. The uniform adoption of the term "peptic ulcer" is an expression of that point of view.

The older surgeons recognized, of course, that under normal conditions the mucous membrane is not digested away, and so it seemed to them neces-

sary to postulate that in ulcer patients there occurs a local decrease in the resistance of the mucosa before an ulcer can appear. As you know, Virchow and Hauser, the great German surgeons and pathologists, suggested that this local decrease in resistance is brought about by thrombosis or by embolism of the gastric vessels. Others have suggested local vascular spasm. Still others mechanical trauma, local decrease in antienzymes, diminished oxidative capacity of the tissue cells and a variety of other speculations have been made, but it has seemed to me that all of these ideas lack experimental and clinical support.

When resection of the stomach became widely adopted surgeons examined the resected stomachs and failed to find evidence of arteriosclerosis in the gastric blood vessels. Indeed, we have always recognized that peptic ulcer tends to occur in young and otherwise healthy people in whom there is no evidence of generalized arteriosclerosis or widespread systemic disease. In the laboratory, too, we found that if we tie off the blood vessels to the stomach

I. Ridgeway Trimble Fund Lecture. Presented at the One Hundred Sixtieth Annual Meeting of the Medical and Chirurgical Faculty on Wednesday, April 16, 1958.

\* Professor of Surgery, Chairman of the Department of Surgery, The University of Chicago, Chicago, Ill.

nothing happens because of the extensive collateral circulation. As we proceed with the ligation, when the critical point is exceeded a large part of the stomach becomes gangrenous, but peptic ulcers are not produced.

In man, too, we learned when we began to resect the esophagus for carcinoma and pulled the stomach upward into the chest, that in some patients we had to tie off a large part of the blood supply to the stomach. When the critical point was exceeded the stomach became gangrenous but peptic ulcers did not appear. In the surgical treatment of ulcer, surgeons learned that local excision of the lesion was not good treatment as it should have been if the disease was a local disease. I have become persuaded that no great number of peptic ulcers are due to a local decrease in resistance of the mucous membrane. However, when we look at a problem of this kind, we have to consider not only the resistance of the mucosa, but also the corrosive properties of the gastric contents.

I think the key to the whole ulcer problem was provided with the demonstration that pure gastric juice, as it is secreted by the mucosa of the fundus of the stomach, has the capacity to digest and destroy all living tissue if it is exposed for any length of time to this pure secretion. The spleen is digested away, the pancreas is digested away, the kidney is digested away, the mucous membrane of the colon, the small intestines, the duodenum and the stomach itself is digested away if we expose it for any length of time to pure gastric juice. The result of that digestion is a lesion that is anatomically indistinguishable from the peptic ulcer that we see in our patients.

Most living tissues resist the digestive action of the normal gastric contents just as does the wall of the stomach. However, the digestive action of the gastric contents is quite different from that of the pure gastric juice secreted by the fundus. Gastric contents consist of swallowed food, swallowed saliva, mucus from the pyloric antrum, regurgitated bile and pancreatic juice, as well as gastric secretions. All of these substances, food, mucus, regurgitant bile and pancreatic juice, are diluting or buffering agents. They serve to neutralize or partially dilute the hydrochloric acid and pepsin of the gastric juice.

When a hypersecretion of gastric juice occurs, the buffering capacity of these agents is gradually overcome and there accumulates in the stomach a

content which approximates pure gastric juice in its acid and pepsin concentration. I should like to present for your consideration this evening the concept that peptic ulcers are not due to a local decrease on the part of the mucous membrane but rather that they are brought about by a marked increase in the corrosive properties of the gastric content as a result of the hypersecretion of gastric juice; furthermore, that the hypersecretion of the gastric juice in duodenal ulcer patients is usually of nervous origin, whereas the hypersecretion of gastric juice in gastric ulcer patients is usually of hormonal or humoral origin.

The evidence that duodenal ulcers are usually due to a hypersecretion of gastric juice of nervous origin may be summarized as follows: 1. Duodenal ulcer patients will usually be found to secrete from three to ten times as much gastric juice in the fasting empty stomach at night as do normal people. 2. If we reproduce a hypersecretion of this extent in experimental animals, they regularly developed ulcers in the duodenum. 3. If we cut the vagus nerves to the stomach in duodenal ulcer patients, the fasting hypersecretion of gastric juice is abolished, indicating that it is of nervous origin. 4. If we abolish the fasting nocturnal hypersecretion of gastric juice in duodenal ulcer patients by cutting the vagus nerves, the duodenal ulcers usually heal, and if we combine this operation with an adequate drainage procedure which prevents stasis of food in the antrum, the ulcers remained healed.

As many of you know, there has been a widespread controversy about this vagotomy operation both in this country and abroad since we introduced it in 1943. I feel certain however, that this controversy has revolved about the question—is vagotomy combined with a drainage procedure as efficient in the treatment of duodenal ulcer as is subtotal gastric resection? No surgeon that I know of questions the fact that cutting the vagus nerves exerts a healing effect on duodenal ulcer. In our experience the efficacy of the vagotomy procedure is directly parallel to the reduction in secretion in gastric juice that is brought about by dividing the vagus nerves to the stomach.

The evidence that gastric ulcers are brought about by a hypersecretion of gastric juice of humoral or hormonal origin depends in part upon our experience with the surgical treatment of peptic ulcer and in part upon laboratory studies. Physicians have



recognized that there are certain profound differences between gastric ulcers and duodenal ulcers. Gastric ulcers tend to occur a decade later than duodenal ulcers. Their incidence is more nearly equal in both sexes.

In our own experience with duodenal ulcers, and we now have some 1500 patients, males exceed females in the ratio of nine to one, whereas in gastric ulcers, males only slightly exceed the incidence in females. However, it is with respect to the secretion of gastric juice that we see a profound difference. I said that duodenal ulcer patients usually—perhaps always—secrete from three to ten times as much gastric juice in the fasting empty stomach at night as do normal people. Gastric ulcer patients usually secrete less gastric juice in the fasting empty stomach at night than do normal people. It is, however, in their response to surgical treatment that we see a profound difference between the two lesions. When formerly we performed gastroenterostomy for duodenal ulcer and gastric ulcer, we found that there was a high incidence of stoma ulcers after gastroenterostomy for duodenal ulcer, but a very low incidence when we did this operation for gastric ulcer. When we began to resect the stomach in the treatment of ulcer, we were impressed by the fact that there was usually a fairly high incidence of stoma ulcers after low gastric resection for duodenal ulcer, but after low gastric resection for gastric ulcer almost never a stoma ulcer. I believe that these concepts I am presenting tonight satisfactorily account for the differences between gastric and duodenal ulcers in their response to surgery. Both are peptic ulcers. They are not due to a local decrease in resistance. They are in each case caused by a hypersecretion of gastric juice. In duodenal ulcers the hypersecretion is brought about by the nervous system by impulses in the vagus nerves; in gastric ulcers the hypersecretion is usually caused by prolonged liberation of the hormone gastrin from the antrum of the stomach.

I now wish to describe some studies on the fasting nocturnal gastric secretion in normal people and in ulcer patients. These data were secured by putting the individual on a liquid diet for 24 hours to make sure there was no solid food in the stomach. A rubber tube was introduced through the nose into the stomach at nine o'clock at night and continuous aspiration made until nine o'clock the next morning. There was no food in the stomach, no food in the

upper gastrointestinal tract. The patient was shielded from the sight, odor and taste of food. Nevertheless, 32 normal people secreted an average of 562 cc. of gastric juice under these conditions with the free acid of 30 clinical units. Now it so happens if we express the volume in liters and the free acid in clinical units, the product of the two gives us the output of free acid expressed in terms of milliequivalents. Normal people put out in the fasting empty stomach at night between 15 and 20 milliequivalents of free hydrochloric acid in a 12 hour period. 309 duodenal ulcer patients put out an average of 63 milliequivalents. These patients may also secrete a little more gastric juice in response to the stimulus of food, histamine or alcohol than do normal people, but the difference is not nearly so great as in the fasting secretion. They may secrete only ten per cent more juice in response to stimulation than does the normal, but in the fasting empty stomach at night there is a profound difference. I think this determination of the fasting nocturnal secretion is the most important measure that the physician can make in a duodenal ulcer patient. It tells him a good deal about the severity of the disease. I use it also as an indication for surgical treatment.

I can explain this in the case of a physician who had a duodenal ulcer for many years. He came to me to ask me whether I thought he ought to have surgical treatment regime. I said to him that I did not know how serious his problem was; that he did have a deformed duodenal bulb and a crater. However, I would like to know how much acid he secreted in the empty stomach at night because that is when a duodenal ulcer is made. We found out that he put out the astonishing total of 358 milliequivalents as compared with ten to 20 put out by normal people. I explained to him that the job of the internist in his case would be very difficult. He could neutralize that excessive secretion for a time in the hospital, but a regime that would be successful would be so arduous and require such self-discipline that it was unlikely that it would be continued for any long period of time. You might get the ulcer to heal but it would promptly recur. If I find that a patient puts out more than 75 milliequivalents of acid in the fasting night secretion, I tell him that the probability of being cured by medical treatment is slight and that he ought to have surgery. He ought to have something done to reduce the excessive secretion.

This excessive secretion in duodenal ulcer patients is of nervous origin as is indicated by the fact that in these patients after vagotomy the secretion fell to below the level found in normal people. It fell to five milliequivalents. This is the most important single fact that has come from our studies, both in the laboratory and in the clinic. It provides strong objective support for the old view that duodenal ulcer is a psychosomatic disease. It is attractive to speculate that in some way the tensions and strains of modern life, worry and anxiety, set up a secretory hypertonus in the vagus nerves and that it is this way the nervous system plays a role in the cause of ulcer. We know from experimental work that a hypersecretion of the degree found in patients will produce a duodenal ulcer in laboratory animals.

I do not have time to outline all the data in support of this statement. A significant experiment was made by Varco, Code, and Wangenstein at the University of Minnesota. They produced a hypersecretion of gastric juice in animals by implanting pellets of histamine and beeswax in the subcutaneous tissue. The liberation of histamine from these pellets caused a sustained hypersecretion of gastric juice and these animals regularly developed ulcers in the duodenum. We have confirmed this observation many times, and, in addition, you will see later on, have secured evidence that a hypersecretion of gastric juice of this degree will regularly produce ulcers in the normal mucosa of the stomach or duodenum. It is unnecessary to postulate some local factor decreasing the resistance of the mucosa.

Twenty-three gastric ulcer patients put out an average of 12 milliequivalents of free HCl, or less than the amount put out by normal people. There is thus no evidence that gastric ulcer patients have a hypersecretion of gastric juice in the empty stomach. Gastric secretion during fasting is of nervous origin. The nervous mechanism of gastric secretion in gastric ulcer patients is less active than normal. Since there is no evidence of a hyperactivity of the vagus nerves in gastric ulcer patients there is no indication for vagotomy in these patients. We had to learn this by clinical experience as well as by laboratory studies.

In our early experience we tried vagotomy in gastric ulcer patients and found that it was an unsatisfactory operation and now I think we know why.

When you cut the vagus nerves to the stomach, you divide both the secretory and the motor fibers.

As a result, the tonus and motility of the stomach is markedly decreased for a period of four or five days. It is essential then that the stomach be decompressed. If it becomes over-distended during this first five-day period, the gastric wall loses its tonus just as does the smooth muscle in over-distention of the urinary bladder or acute dilatation of the heart. At first we decompressed the stomach by means of an indwelling naso-gastric tube. This, however, proved to be very uncomfortable for the patient after several days, so during the past five years we have been using a Foley bag introduced by a gastrostomy incision in the fundus of the stomach. About ten cc. of water is placed in the bag, omentum is wrapped around the catheter, and the stomach is infolded around the catheter by several purse string sutures. Omentum is wrapped around the catheter which is brought out through the abdominal wall by a stab wound to the left of the incision. This is a more comfortable and better method for decompressing the stomach. We leave the catheter in place for ten days. At the end of five days we begin feeding the patient small amounts of water, then gradually add semi-solid food, all the time testing with the catheter if the stomach is empty at nine o'clock at night. If it empties satisfactorily we add a little more to the diet the next day. Whenever a vagotomy is done, one must add a drainage procedure. In most of our patients we have performed a posterior gastroenterostomy with the stoma located in the antrum. A gastroenterostomy with the stoma located in the fundus or in the body of the stomach may permit stasis of food in the antrum and, as a result, a hypersecretion of gastric juice of humoral origin. You must prevent stasis of food in the antrum. That can be done by gastroenterostomy with the stoma located close to the pylorus. We make the stoma about two centimeters in diameter or sometimes a little less. A small stoma is much less apt to produce the dumping syndrome than is the larger one. The dumping syndrome is caused by absence of the pylorus, and in some patients the pylorus is an exceedingly important organ.

An alternative method is to use a pyloroplasty of the type devised by Joseph Weinberg of Los Angeles. It is very much like the Heineke-Mikulicz pyloroplasty except that Weinberg insists that the incision be closed transversely with a single layer of interrupted silk sutures. No attempt is made to infold the suture line. He has pointed out that it is

this infolding which compromises the lumen and causes obstruction. I have used this pyloroplasty of Weinberg's type in about 50 patients with very good results. It is better physiology than the gastroenterostomy and it may well be that this will turn out to be the operation of choice. For the most part, however, I am still treating the majority of patients by a posterior gastroenterostomy of small size, located close to the pylorus. Dr. Weinberg says that he can perform his pyloroplasty even when the duodenum is quite markedly deformed by scar tissue. Usually I have avoided doing the pyloroplasty when there is edema or a great deal of deformity of the duodenal bulb.

The idea that the tensions and strains of modern life produce duodenal ulcer by causing a hypersecretion of gastric juice of nervous origin has not been accepted entirely by all people. Some have suggested that these tensions produce the hypersecretion of gastric juice by way of the so-called hypophysis adrenal stress mechanism. Seymour Gray at Harvard and French at California have postulated that physical and mental stress cause stimulation of cells in the hypothalamus and that this in turn stimulates the anterior pituitary causing a release of ACTH. ACTH causes an increased liberation of cortisone from the adrenal glands and cortisone is thought to stimulate gastric secretion as evidenced by an increased output of pepsinogen in the urine. We have been unable to secure evidence supporting this view of Gray and French that either cortisone or ACTH produces any real stimulation of gastric secretion. However, our skepticism concerning the validity of this theory stems rather from the following observations on ulcer patients.

In a series of 85 duodenal ulcer patients the fasting nocturnal secretion was determined on the third night before surgery. It averaged 48.48 milliequivalents. On the second night before surgery, 47.92 milliequivalents. On the night immediately before operation 67.57 milliequivalents. I think it is quite likely that most people, perhaps all people, have some degree of anxiety and apprehension on the night before a major surgical procedure. It may well be that this hypersecretion that we so regularly observe the night before vagotomy is explainable on the basis of this increased tension and anxiety. At all events, it is significant that following vagotomy the hypersecretion disappears; the hypersecretion incident to anxiety about the operation and also the

hypersecretion present in the duodenal ulcer patients on the second and third night before the operation. This should not occur if the cause of the hypersecretion is due to cortisone. We measure the output of acid in the fasting night secretions every day for the first five days after operation. The Foley bag is in place. We simply collect the juice secreted during a 12-hour period at night, titrate the acid and measure the volume. When we find low outputs, we feel reasonably sure that we have cut all the vagus nerves. Another measurement is made at the end of 11 days. We repeat the observation in six months to a year and if we find at the end of the year or 18 months the fasting night secretion is still less than normal, and if there is no stasis of food in the stomach, we feel confident that the patient is going to remain free of ulcer disease. Many of these patients have had not only a vagotomy and gastroenterostomy or pyloroplasty, a number of them have also had a cholecystectomy or repair of large ventral hernias. There was in many cases a good deal of operative trauma. Physical trauma causes an increased output of cortisone and ACTH into the blood stream. Nevertheless, during the first 48 hours when the increased liberation of these cortical steroids occurs, there was no increase in gastric secretion. This is the kind of data that has made me very skeptical of the validity of this hypophysis-adrenal stress mechanism as playing a role in the usual duodenal ulcer patient. It is possible that the Curling ulcer occurring in patients with burns or the aggravation of ulcer by severe trauma or accidental injury may be in part due to this stress mechanism. I have not yet seen convincing data to persuade me that that is the case, but my mind is open about this part of the question.

The great Russian physiologist Pavlov recognized that the stomach would secrete gastric juice when food is introduced into it, even though the vagus nerves had been completely divided. He thought this was due to a local nervous reflex. About 1903-1904, an English physiologist by the name of Eddins postulated that this increase in secretion is due to a hormone which he called gastrin and which is liberated from the mucous membrane of the antrum of the stomach when it comes in contact with food or the higher products of gastric digestion. This must be one of the most successful guesses in the whole history of gastrointestinal physiology because it must be admitted—as Frank Mann and Ivy

pointed out—the data that Edkins secured in support of his theory was very meager and inadequate. Indeed, it seemed from the experiments of Mann and Ivy that the antrum was not more significant than other parts of the gastrointestinal tract. However, while the physiologists were skeptical of Edkin's theory, the surgeons began to be persuaded there was something to it. When they performed the antrum exclusion operation of Finsterer and Devine in resection for duodenal ulcer they found that if they left a little of the antrum behind, there was a high incidence of gastrojejunal ulcer. If they took all the antrum out, the incidence was less. It was this surgical experience that prompted us to restudy the physiology of the antrum when we secured better quantitative methods for collecting the gastric juice from isolated stomach pouches.

We prepared Heidenhain pouches, or isolated stomach pouches, from the greater curvature of the stomach devoid of vagus innervation. When the animal was fed, these pouches secreted gastric juice. A humoral agent passed from the stomach into the blood stream and reached the pouch where it stimulated the pouch to secrete. We prepared such a dog and collected the gastric secretion every day for 15 days. We determined the output of acid each 24 hours. We then excised the antrum a little at a time and as we did that the secretion from the pouch decreased until when the antrum was completely removed, the secretion was almost entirely abolished. This was an extremely interesting experiment to the physiologist because it showed him that although food still came in contact with the lesser curvature of the stomach and the entire intestinal tract, very little stimulation of gastric secretion resulted when the antrum was removed and the vagus nerves divided. It is of interest to the surgeon because it shows him that he can almost abolish the secretion of gastric juice by taking out the antrum and dividing the vagus nerves without sacrificing any part of the stomach that contains the acid secreting glands. Indeed, by cutting the vagus nerves and taking out the antrum he can reduce the secretion of gastric juice more than by taking out seven eighths of the stomach if the vagus nerves to the remaining pouch of the fundus are intact.

In a second experiment we prepared an isolated pouch of the entire stomach, and collected the gastric secretion every day for 18 days. A stomach

of this type, with the vagus nerves divided and with the antrum of the stomach in the isolated pouch, secretes very little gastric juice. We planned to test Edkin's theory by transplanting the antrum from the isolated stomach into the intestine where it would come in contact with food. At first we transplanted it into the colon to see if the operative technique would play a role in the results secured. To my astonishment, when we put the antrum into the colon there was a marked sustained hypersecretion of gastric juice. When we took the antrum out of the colon and transplanted it to the abdominal wall so it remained empty and no food entered it, the secretion decreased. When we transplanted the antrum back into the duodenum there was again sustained increase in gastric secretion. This, of course, made it necessary for us to modify Edkin's gastrin theory because it became obvious that when the antrum is in the colon and is exposed to feces from which food has been removed by digestion and absorption it still is vigorously stimulated. Food is certainly not the only agent that causes the release of the hormone from the antrum mucosa. We made some observations here that were interesting with respect to the ulcer problem. When we had animals with isolated whole stomach pouches with the vagus nerves divided, very little gastric juice was secreted and the stomachs remained normal for three, four and five years. We never observed an ulcer in such an isolated vagotomized stomach. When we transplanted the antrum into the colon and produced a hypersecretion of juice, the dogs regularly developed typical progressive penetrating bleeding ulcers in the isolated fundus of the stomach. Pure gastric juice when exposed to the normal mucosa of the stomach digests it and when it digests it, it makes a circumscribed ulcer which looks like the ulcer that we see in clinical patients.

The antrum is the only part of the stomach that produces gastrin. If we fashion pouches from the fundus of the stomach and transplant them into the intestines there is no stimulation of gastric secretion. Here, then, we have additional evidence in support of Edkin's theory that the antrum or lower fifth of the stomach is an endocrine organ which under some conditions manufactures a stimulant for gastric secretion. No other part of the stomach supplies that hormone.

It seemed to us that when we transplanted the antrum into the colon it caused a greater secretion



of gastric juice than when the antrum was in the duodenum. We prepared a Pavlov accessory stomach pouch and measured the secretion every day for 21 days. Then we transplanted the antrum into the colon as a diverticulum and produced a sustained hypersecretion of gastric juice two to three times as great as when the antrum was in its normal location. This was an interesting discovery from two points of view. (1) What causes the antrum to undergo such tremendous hyperactivity when it is transplanted into the colon? (2) Will a hypersecretion of this degree of humoral origin cause an ulcer in otherwise normal gastric and intestinal mucosa?

We investigated the second question first by transplanting the antrum into the colon in dogs and re-establishing intestinal continuity by a Billroth's I or Billroth's II procedure. We found that when we made a Billroth's II, 80 per cent of the animals developed typical stoma ulcers opposite the anastomosis with the stomach; in the Billroth's I operation, somewhat less. I think if we had kept the animals long enough, all would have developed these typical ulcers.

They displayed the same sharply punched out appearance as do the ulcers we see in our patients. This is a curious fact. Gastric juice of course comes in contact with a wide area of jejunal mucosa. Why does it not produce a generalized digestion? Why does it produce a sharply circumscribed lesion? We don't know the answer to that. When we subject the normal stomach, the normal duodenum or the normal jejunum to the digestant action of the hyper-acid gastric content, it breaks the mucosa down and produces just such a sharply punched out lesion. We never see an ulcer where we transplanted the antrum into the colon. The antrum secretes a neutral nondigestive fluid and never causes ulcers in the colon.

While we had the antrum transplanted to the abdominal wall in some of the experiments, we made a number of tests with various food substances. In a dog prepared with a Heidenhain vagus denervated pouch and a separate pouch of the antrum we found that when we put neutral food such as liver solution into the isolated antrum, it caused a vigorous secretion of gastric juice from the Heidenhain pouch. When, however, we acidified this liver solution to pH 1 and introduced it into the antrum in exactly the same way, it caused no stimulation of gastric secretion. This, I believe, provides an answer to the negative experiments of Mann and Priestly and Ivy

and Farrel. They tested Edkin's gastrin theory with an experiment of this type. They mixed food with gastric juice as Edkins had postulated, put it in the antrum but got no secretion. They were accordingly skeptical of the antrum as a source for the hormone. I think the reason why they got no secretion was because the food was acid in reaction. We have found that when the food is neutral or faintly acid it stimulates abundant secretion when it comes in contact with the antrum, but that when it is acid in reaction, there is no secretion.

We found also in confirmation of the work of other people, that if we distended the antrum pouch, we could get a secretion of gastric juice from the fundus pouch. Grossman had demonstrated this fact before, and our experiment confirms his finding. We introduced either rubber bags into the antrum pouch or simply distended the antrum with normal salt solution. We observed an abundant secretion of gastric juice from the Heidenhain pouch. However, when we distended the antrum pouch with acid, there was no secretion of gastric juice. This is interesting because it suggests that in the normal mechanism of gastric secretion we have a device which provides for the secretion of gastric juice when it is useful for gastric digestion and stops the secretion when sufficient gastric juice has been secreted. We may say for instance that in normal people during the interval between meals, there is a steady, continuous secretion of gastric juice which amounts in a 12-hour period at night to ten to 20 milliequivalents of hydrochloric acid. When we partake of food there occurs an immediate augmentation in gastric secretion, at first due to impulses in the vagus nerves aroused reflexly by the sight, odor and taste of food. This is continued when the food enters the stomach and gastric digestion begins. Food is carried downward into the antrum of the stomach, digestion peristalsis increases the tension within the antrum, liberation of gastrin occurs, and a continuous secretion of gastric juice. When the food becomes acid in reaction optimum for peptic digestion, the gastrin mechanism cuts off. There is thus in the antrum a protective mechanism which regulates gastric secretion. There is still dispute concerning the nature of that protective mechanism. We believe the inhibition of gastric secretion is due to cessation of liberation of gastrin. Some people have suggested that it is due to the liberation of a second hormone from the antrum; an inhibitory hormone which inhibits gastric secretion.



We are skeptical of this view because of the following experiment. We prepared an animal with a Heidenhain pouch and two isolated pouches of the antrum, A and B. When we put food into either pouch A or B, it stimulated gastric secretion from the fundus pouch. In this experiment we put three per cent liver solution every 15 minutes in pouch A. When a copious secretion of gastric juice was established we put hydrochloric acid solution in pouch B. There was very little if any inhibition of gastric secretion.

We then reversed the experiment, only in this case we put acetyl choline in pouch A and hydrochloric acid in pouch B. There was no inhibition of secretion. Using the experiments of this type back and forth in various ways stimulating one pouch and putting acid in the other, we were unable to secure evidence that there is an inhibitory hormone liberated from the antrum, so I believe that the simple explanation is probably correct, that when the food becomes acid in reaction, it no longer stimulates the release of gastrin from the antrum. Acid probably acts very much like cocaine. We found that if we cocaine the antrum pouch, it no longer responds to food or distention. In a typical experiment we distended the antrum and secured an abundant secretion of gastric juice. Then we cocaine the antrum and distended it in the same way but got no secretion. I think that both cocaine and acid interfere with the liberation of gastrin from the antrum.

A long time ago, a Russian physiologist, Sokolov, noted that the introduction of acid into the duodenum inhibits the secretion of gastric juice. We speculated on the mechanism of this phenomenon. We knew that when acid enters the duodenum, it causes the formation of pancreatic secretin. Bayliss and Starling showed that this pancreatic secretin enters the blood stream and starts a vigorous secretion of pancreatic juice. It occurred to us that this pancreatic secretin which is produced when acid enters the duodenum might also inhibit gastric secretion. We found that this is true. We prepared an animal with the Heidenhain pouch and a pancreatic fistula. We fed this animal and got a vigorous secretion of pancreatic juice and gastric juice. At this point we gave the animal Lilly's pancreatic secretin intravenously, secured an abundant secretion of pancreatic juice but an inhibition of gastric secretion.

We then tested this finding in a more emphatic way with larger doses of secretin. We gave an

animal a test meal and got an abundant secretion of gastric juice. Next day we gave him the same meal, but in addition intravenous secretin every 15 minutes. The secretion of gastric juice was completely blocked. There is no doubt that pancreatic secretin as prepared by Lilly & Company contains a humoral agent which inhibits gastric secretion. We are not sure that this humoral agent is the same as pancreatic secretin because, whereas Lilly's product is pure enough for human use, it is not an absolutely pure product. However, I suspect that pancreatic secretin does have this dual effect in that it inhibits gastric secretion at the same time that it stimulates the secretion of pancreatic juice. This of course is good physiology because pancreatic digestion goes on best in an alkaline medium. A mechanism which stimulates pancreatic secretion would be more efficient if at the same time it inhibited gastric secretion. The passage of acid food into the duodenum causes an inhibition of gastric secretion and this is a part of the normal protective mechanism which protects the mucous membrane against the corrosive action of hyperacid gastric contents.

A number of years ago I had a patient with a gastrojejunal ulcer following a gastric resection for duodenal ulcer in which the antrum had been left behind in a Finsterer-Devine exclusion operation. I didn't recognize the significance of the retained antrum at that time and so I treated this patient by a vagotomy through the chest. The jejunal ulcer promptly healed.

Eighteen months later I secured a picture after a barium meal. Barium filled the stump of the stomach and the intestine but also regurgitated through the duodenum, through the pylorus, and into the excluded antrum. This marked regurgitation of food after a Billroth II operation doesn't always occur, but it often occurs. When this food regurgitates backward through the duodenum it may have been acid in reaction at first, but by the time it gets through the duodenum, it has encountered the neutralizing effect of bile and pancreatic juice, so it is likely that when it gets in the excluded antrum, it is neutral in reaction. It continues to stimulate the release of gastrin; there is no automatic acid cutoff mechanism, and that is why I think the excluded antrum is such a powerful ulcerogenic agent.

The high incidence of stoma ulcer after the Finsterer-Devine operation is probably due to the reflux of food through the duodenum into the

antrum. Under normal conditions the antrum ceases to liberate gastrin when the gastric contents become acid, but after this operation the regurgitating food becomes neutralized by the duodenal secretions so that prolonged liberation of gastrin and excessive secretion of gastric juice occur. Removal of the excluded antrum may cause the stoma ulcer to heal. In the light of present knowledge I would have excised the excluded antrum and performed a vagotomy, excised the excluded antrum to remove a potent ulcerogenic stimulus and cut the vagus nerves to eliminate the nervous phase of secretion.

Under what condition, if any, can a prolonged hypersecretion of gastric juice of humoral origin occur in human pathology? The first event that comes to mind, of course, is stasis of food in the stomach. Stasis of food in the stomach could occur if there is a stenosis of the pylorus following, let us say, an old duodenal ulcer or if there is gastric atony. It has long been known by physicians that patients with a duodenal ulcer that produces obstruction or stenosis are prone to develop a secondary gastric ulcer as a complication. Huber and Huntington, in particular, have called attention to this phenomenon.

Now we can postulate that in such a patient there is prolonged contact of food with the antrum. There is probably also increased peristalsis of the stomach secondary to the pyloric stenosis. Both factors cause a continued liberation of gastrin from the antrum mucosa and continued gastric secretion until the buffering capacity of the food is overcome and there accumulates in the stomach a content approaching pure gastric juice in its pepsin and acid concentration. The stomach is digested away and an ulcer forms.

We have experimental evidence that this may occur. In an animal with a Heidenhain pouch we produced pyloric narrowing or stenosis by cellophane tapes. This caused stasis of food in the stomach, hypermotility and a sustained hypersecretion of gastric juice. It is humoral in origin since it is exhibited by the vagus denervated pouch of the stomach.

One of the six dogs treated this way developed a typical gastric ulcer in the main stomach as a result of the pyloric stenosis.

Probably only about 20 per cent of gastric ulcer patients have a previous duodenal ulcer producing pyloric stenosis. For the remaining 80 per cent, I believe there is a hypersecretion of gastric juice due

to stasis because of gastric atony. We know that gastric atony can produce gastric hypersecretion of hormonal origin. The following experiment at first glance appears paradoxical. If we make a pouch of the entire stomach with the vagus nerves intact we get an abundant secretion of gastric juice. If then we cut the vagus nerves along the lower esophagus, the secretion is reduced. We can interpret this effect as due to removal of the nervous phase of secretion.

But if we prepare an animal with a Heidenhain pouch which has no vagus nerves, measure its secretion every day for a month and then cut the vagus nerves in the same place, there is a prolonged excessive secretion of gastric juice. Since it is exhibited by a vagus denervated pouch, it is of humoral origin.

Since it is abolished by the removal of the antrum, we know that it is of antrum origin. We made a Heidenhain pouch, measured the secretion every day for a month, then took out the antrum. The secretion fell to a very low level. We then cut the vagus nerves in the same place and there was no stimulation of secretion. The antrum must be present for the stimulation to occur.

That it occurs as a result of stasis is indicated by the fact if we make a gastroenterostomy with the stoma located in the antrum so that stasis of food in the antrum cannot occur, and then cut the vagus nerves, there is no increase in secretion. This was an extremely interesting experiment to me because it gave us an answer to some of the perplexing findings we had when we first began to do vagotomy for duodenal ulcer, I had no realization at that time of the phenomena that I am talking about. I thought I must do a vagotomy without any other procedure if I was to find out whether vagotomy had any therapeutic value. If I combined it with a gastroenterostomy, which has therapeutic benefit in its own right, I wouldn't know whether the vagotomy contributed anything to it. Five patients in our first series of duodenal ulcer patients had vagotomy alone. This was complete as determined by physiological tests and the ulcers healed and remained healed. Although the fasting night secretion was less than normal, all five developed typical gastric ulcers. At first I thought these must be carcinomas, since they occurred in the stomach with low fasting secretion. It wasn't until later that I realized that in these patients, to be sure, the nervous phase of gastric

secretion was abolished but the humoral phase of gastric secretion was tremendously augmented because of stasis. These are ulcers due to a hypersecretion of gastric juice of humoral origin.

Recurrences after vagotomy are largely due to incomplete nerve section. Sixty per cent of patients with recurrence had positive insulin tests with return of their 12-hour nocturnal secretion to preoperative levels. The remaining 40 per cent of patients had marked pyloric obstruction and a high gastroenterostomy which failed to drain the stomach adequately. We didn't realize the significance of this improper gastroenterostomy as the cause of failure. Three of our failures were due to Ellison-Zollinger tumors.

In summary, I believe that duodenal ulcers are usually caused by hypertonus of the vagus nerves producing excessive gastric secretion in the empty stomach and rapid passage of this juice into the less resistant duodenum.

Eighty per cent of gastric ulcers are caused by hypotonus of the vagus nerves evidenced by decreased secretion in the empty stomach and gastric stasis. Prolonged contact of food with the antrum mucosa causes hypersecretion of gastric juice of hormonal origin and prolonged contact with the hyperacid gastric content produces ulcers in the stomach.

Twenty per cent of gastric ulcers occur in patients with pre-existing duodenal ulcers causing pyloric stenosis. These patients display a fasting hypersecretion of nervous origin and also a prolonged digestive secretion due to stasis of food in the stomach and gastric hypermotility. Both contact of food with the antrum and antrum motility are adequate stimuli for the release of gastrin.

Gastrojejunal ulcers often form after antrum resection for duodenal ulcer but not for gastric ulcer. In the duodenal ulcer patients after low gastric resection, the hyperactive cephalic phase persists and

so recurrent ulcers form. That is why surgeons have had to remove increasing amounts of the stomach. In gastric ulcer patients after removal of the antrum, no gastrojejunal ulcers form because the cause of the hypersecretion is removed when the antrum is excised.

I have chosen to present these views, not because I want to tell you how you should treat your ulcer patients or what kind of operation that you ought to do. There are two ways in which the surgeon can reduce the secretion of gastric juice. He can take out the end organ by doing a resection of the part of the stomach that secretes the acid; this is the method that Dr. Wangensteen prefers in his so-called segmental resection. The other way is what I would call a physiological method. An attempt is made to discover the cause of the hypersecretion in the individual patient and correct it. In the duodenal ulcer patient I am persuaded that the cause of the hypersecretion is excessive activity of the vagus nerves, and therefore I believe that the definitive operation should be gastric vagotomy combined with a drainage procedure that prevents stasis of food in the antrum. For gastric ulcer patients I believe vagotomy should not be done because the vagus nerves are not hyperactive, but rather that the antrum should be removed. Gastric ulcer is difficult to differentiate from gastric carcinoma, and this enters into the picture. I think, however, in fairness to our internists, we should recognize that their ability to differentiate between gastric ulcer and carcinoma is very much better now than it was 20 years ago. Exfoliative cytology has done a lot. Gastroscopy has done a lot. Nevertheless, this problem is still before us and we as surgeons have a great responsibility.

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#### AMERICAN ASSOCIATION OF PHYSICIANS AND SURGEONS

The AAPS will hold its annual meeting April 2, 3 and 4 at Fort Worth, Texas. All interested doctors are invited to attend.

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## Scientific Papers

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### ADENOMATOID TUMORS OF THE GENITAL TRACT

PETER W. RIECKERT, M.D.\* AND RUSSELL S. FISHER, M.D.\*

On rare occasions the female and male genital tract shows a usually benign tumor growth to which a variety of diagnostic terms have been applied, such as lymphangioma (6), angiomyoma, lymphadenoma, adenomatoid tumor (1, 4). In recent years the name *mesothelioma* was favored, considering cell dimensions, cytologic features (8), mucicarminophilic material (5), direct continuity with the overlying peritoneal mesothelial cells (2), or in cases of the male genital tract, the intimate relationship with the tunica vaginalis testis (3, 9).

Horn and Lewis (5, extensive literature) recorded 29 tumors of the female genital tract; 13 involved the uterus, 11 were of tubal, and five of ovarian origin. The majority of the mesotheliomas of the female genital tract have been incidental findings in autopsies or biopsy specimens in patients between the ages of 30 and 50. The tumors are exceedingly rare before puberty (1). No relation to sex, parity, trauma, inflammation, or endocrine disturbance were noted. The growth in the uterus proper occurs chiefly within the musculature of the cornu region as a subserosal, circumscribed mass varying from the size of a pea to the size of an orange, and resembling on cut surface a leiomyoma. In the male the majority of the "adenomatoid tumors" are in, or immediately adjacent to the epididymis, while the remainder are in the cord and the testes. They are small, solitary, smooth, firm and encapsulated tumor nodules which show, on cut surface, glistening gray-white fibrous stroma with occasional yellowish foci. About 25 per cent of the tumors cause pain, while the remainder are symptomless. Microscopically, the basic pattern of the tumors is a network of solid cell cords intervened by a fibrous stroma which may contain smooth muscle bundles, scattered mononuclear and plasma cells, and lymphoid nodules with secondary germinal centers. The tumor cells show acidophilic

cytoplasm with vacuoles. The nuclei are medium sized, round, and uniform, with sharp nuclear membranes and centered basophilic nucleoli. Depending on the stage of development, intracellular vacuoles develop within the solid cords. The vacuoles enlarge, coalesce, and intermingle the persisting segments of solid cords. The entire process results in large irregular vacuoles which are surrounded by flattened lining cells, causing distortion of the cord remnants. The vacuoles do not contain stainable material (1) except for a few reported cases which showed mucicarminophilic material (5). There is no definite capsule, but the periphery of the tumor consists of compressed collagen or muscle fibers which form a pseudocapsule. The latter may be intermingled with tubules and imitate local invasion.

#### REPORT OF CASES

*Case 1:* A 45 year old white woman, Para I, gravida I, was admitted for meno- and metrorrhagia of one month's duration. Myomas were noted on pelvic examination and a total hysterectomy and bilateral salpingo-oophorectomy was performed. Pathologic findings: The uterus measured 13 X 10 X 7 cm., and showed several intramural and subserosal myomata. Within the uterine wall, approximately one cm. anterior and two cm. inferior to the left cornu, there was a circumscribed nodule measuring 1.8 cm. in greatest diameter. The lesion resembled and was grossly indistinguishable from a leiomyoma (Fig. 1a). Microscopically (Fig. 2a), the nodule exhibited an angioadenomatoid pattern, with numerous groups of partly compactly arranged, partly scattered glandular or vascular spaces separated from one another by abundant smooth muscle bundles and scanty fibrous stroma. The latter contained a few histocytes and lymphocytes. High power microscopy revealed single remnants of cell cords distorted by large intracellular vacuoles. The cells lining the spaces varied from endothelial-like

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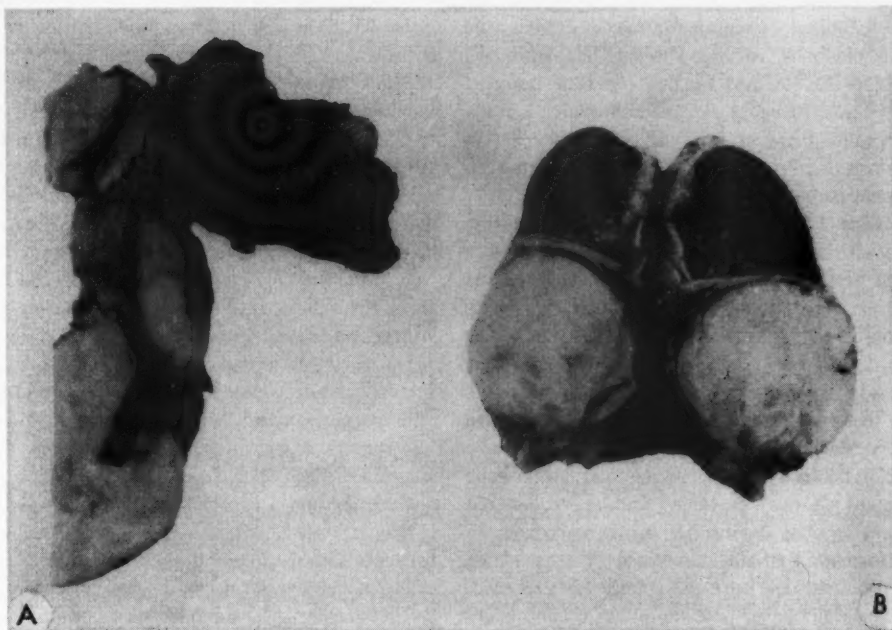


FIG. 1a. Adenomatoid tumor within uterine wall

FIG. 1b. Adenomatoid tumor of right epididymis

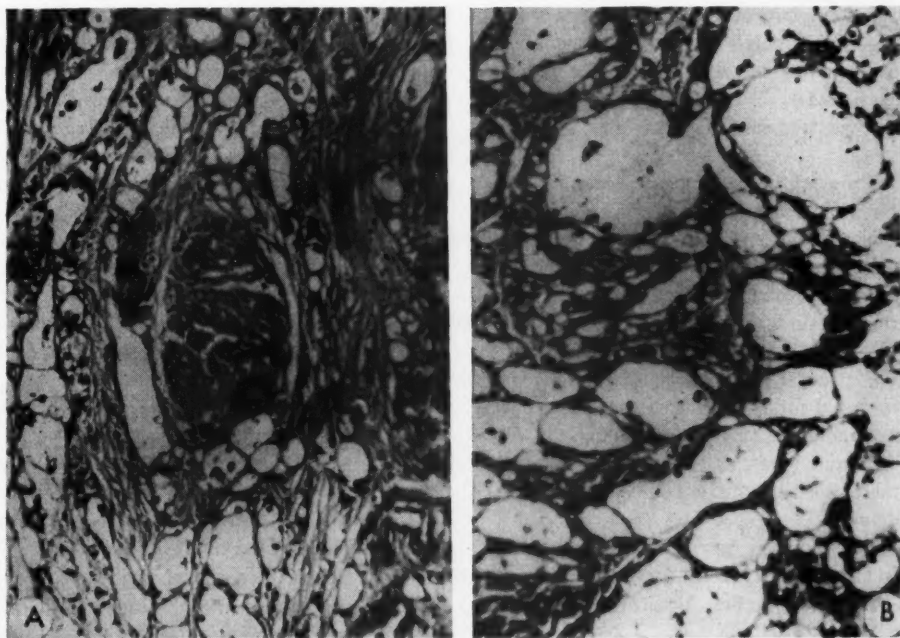


FIG. 2a. Case 1. Mucicarmine stain.  $\times 100$ . Adenomatoid tumor with vacuolation of cell cords and smooth muscle bundles

FIG. 2b. Case 2. H. E. stain.  $\times 180$ . Adenomatoid tumor with remnants of cords distorted by large intra- and intercellular vacuoles.



cells to cuboidal elements. In several areas the vascular channels extended somewhat into the "pseudocapsule" formed by dense muscle bundles. Special stains revealed no metachromatic mucicarmophilic, PAS, or fat (Oil red O and Sudan IV) positive material within the intra- or intercellular vacuoles.

*Case 2:* A 54 year old white male entered the hospital with the chief complaint of a hard mass in his right testicle. The tumor was first noted six months prior to admission as a painless mass. At that time a biopsy was interpreted as embryonic carcinoma, but the patient refused surgery. On his present admission his right testicle was "about the size of a hen's egg," round, regular, movable, smooth and very hard. The right epididymis was also enlarged but soft. There was no inguinal lymph node enlargement. X-rays of bones and chest did not reveal metastatic lesions. A right orchidectomy was performed. Pathologic findings: The specimen consisted of a testicle with the epididymis and cord. Within the right lower pole there was a completely encapsulated mass which was white on cut section and measured four cm. in diameter (Fig. 1b). There were adhesions over the surface of the tumor which largely obliterated the sac, but no penetration of the tunica albuginea was present. Section of the cord showed marked varicosity of the vessels, but there were no recognizable metastases within this region.

The microscopic appearance resembled Case 1, except for an increase in the amount of connective tissue which was intermingled by lymphoid nodules with small germinal centers. As in Case 1, there was abundance of smooth muscle bundles (Fig. 2b). Mucicarmine stain was negative.

*Case 3:* A 33 year old male was admitted for removal of a tender pea sized testicular mass which had been noted for the last two years as a slowly growing tumor. On operation, within the lower pole of the epididymis, exterior to the tunica albuginea, there was a rubbery nodule measuring 0.6 cm. in diameter.

The microscopic picture was generally similar to that in Case 1 and 2, except for a reduced amount of smooth muscle bundles. Mucicarmine stain was negative.

#### DISCUSSION

The cause of adenomatoid tumors is not known. Trauma has been considered, while the case of Leach

disclosed associated inflammation (7), but neither of these features appears to be of significance.

Much has been written about the nature of this lesion, as evident from the list of synonyms. Endothelial, epithelial, mesonephric, and mesothelial origin have all been considered. Wyatt and Khoo (10) rejected the endothelial origin as used in the older literature (6) because the lesions were not seen at birth, no sclerosing process could be found, and the cells were often vacuolated. The position of the nodules along the fallopian tubes, within the uterine musculature, and not in the region of the wolffian remnants, as well as the lack of cyclic changes, speaks against a "genital anlage tumor." In view of the morphologic findings, Golden and Ash (4) called them adenomatoid tumors. A mesonephric origin could not be substantiated (10). The recently favored concept of mesothelial origin is based on the location (2, 3, 9), cytologic features (8), and mucicarmophilic material within the gland-like spaces (5). However, so far, no malignant derivatives have been described; the characteristic angioadenomatoid pattern of adenomatoid tumors is rarely found in other mesotheliomas; no direct connections between tumor and adjacent mesothelial lining has been observed, and occasionally seen mesothelial proliferations do not produce an adenomatoid pattern. Therefore, the noncommittal and descriptive term "adenomatoid tumor" is favored in both the female and male sex.

The abundance of smooth muscle in two out of three cases is noteworthy. It may be considered simply as a neoplastic invasion of the myometrium or a pre-existing myoma, since Case 1 showed several other myomata. However, the nodules from the male genital tract also showed smooth muscle bundles in varying degrees. Therefore, the conception of the smooth muscle as an integral part of the tumor is favored.

Ultimately, the question of malignant transformation arises. In males, Golden and Ash (4), Fajers (3), and Evans (2) report no case of malignancy, and adenomatoid tumors have been present for as long as 22 years. Twenty-five out of 29 cases of the female genital tract reported by Horn and Lewis (5) were definitely benign; two were thought not to represent adenomatoid or mesothelial tumors; and one was considered malignant on histologic invasion, which is probably not a valid reason. Only in one case was there noted a peritoneal spread six months following removal (10). However, reviewing the gross descrip-

tion, the behavior of the tumor, and the given microscopic figures, this type of tumor does not represent the characteristic features of an adenomatoid tumor. To use this case in order to prove malignant transformation seems to be at least very doubtful.

In view of these facts the prognosis seems to be excellent, since out of approximately 96 cases of the literature no definite malignant tumor has been reported.

#### SUMMARY

Three cases of "adenomatoid tumor" of the female and male genital tract are recorded and the literature is reviewed. These adenomatoid tumors of the female genital system are usually incidental findings in surgery and postmortem material, and may simulate leiomyoma on physical examination, operation, and gross pathologic examination. The tumors of the male genital tract very often grow as palpable, occasionally painful nodules within the scrotal sac. The proposed theories of the origin of this type of tumor are not entirely satisfactory and the non-committal term "adenomatoid tumor" is favored.

The clinical prognosis is excellent, since no definite malignant transformation has been reported.

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#### ACKNOWLEDGMENT

The authors wish to acknowledge their debt to Perry Burgess, Jr. for preparation of the photographs.

#### REFERENCES

1. DIXON, F. J., AND MOORE, R. A., Atlas of Tumor Pathology, Section VIII, Fascicles 31b and 32.
2. EVANS, N., Am. J. Path. **19**: 461-471, 1943.
3. FAJERS, C. M., Acta path. et microbiol. Scandinav. **26**: 1-23, 1949.
4. GOLDEN, A., AND ASH, J. E., Am. J. Path. **21**: 63-79, 1945.
5. HORN, R. C., JR., AND LEWIS, G. C., JR., Am. J. Clin. Path. **21**: 251-259, 1951.
6. KERMAUER, F., Arch. f. Gynäk. **83**: 411-421, 1907.
7. LEACH, W. B., Am. J. Clin. Path. **20**: 970-973, 1950.
8. MASSON, P., RIOPELLE, J. L., AND SIMARD, L. C., Re. Canad. de biol. **1**: 720-741, 1942.
9. ROBINSON, J. N., Brit. J. Urol. **17**: 68-69, 1945.
10. WYATT, J. P., AND KHOO, P., Brit. J. Urol. **22**: 187-194, 1950.

#### MARYLAND SOCIETY OF PATHOLOGISTS

New officers of the Maryland Society of Pathologists, who will serve during 1959, are:

##### President:

LOUIS B. THOMAS, M.D., National Institutes of Health, Bethesda 14, Maryland

##### Vice-President:

ROBERT SOLOMON, M.D., Sinai Hospital, Baltimore, Maryland

##### Secretary-Treasurer:

EDWARD C. MCGARRY, M.D., Suburban Hospital, Bethesda 14, Maryland

##### Members of the Council:

E. C. H. SCHMIDT, M.D., Memorial Hospital, Eastern Maryland

PAUL F. GUERIN, Baltimore, Maryland

RUSSELL S. FISHER, M.D., Baltimore, Maryland

# TUBERCULOSIS OF THE EAR

JOSEPH W. CAVALLARO, M.D.<sup>1</sup> AND N. EDWARD NACHLAS, M.D.<sup>2</sup>

**Introduction.** External otitis is a common disease and rarely offers any long standing diagnostic problem, although occasionally therapeutic measures are not as gratifying as one would wish. The case here reported presented a diagnostic problem requiring repeated hospitalization and extensive study before a definite diagnosis was made and treatment instituted.

**Case Report.** The patient, a 39 year old white male, was first seen on January 3, 1957, complaining of a discharge from the left ear. Itching was present. A small nodule on the tragus was seen by the family physician. The discharge was constant and was accompanied by itching and a feeling of fullness. The only herald of the impending events related above was the appearance of a small, flesh-colored, hard, discrete nodule intimately associated with the superior portion of the tragus. No history of tinnitus, vertigo, or pain was recognized during the early periods of the infection. A culture of the clear non-odorous discharge revealed hemolytic staph. aureus sensitive to Chloromycetin,<sup>®</sup> Achromycin,<sup>®</sup> and Aureomycin.<sup>®</sup> The patient received a full course of therapy including Burrow's solution, neomycin and cortisone ointment locally; and Gantrisin<sup>®</sup> and Aureomycin<sup>®</sup> systemically. A biopsy of the granulations was taken and reported as chondrodermatitis nodularis chronica. Since there was almost no change in the appearance of the lesions, the patient was admitted to the hospital for study.<sup>3</sup>

**Past History.** In 1941 the patient's army physical revealed a lesion of the apex of the right lung. He entered the state sanatorium and after eight months was discharged. At no time did the patient complain of weight loss, hemoptysis, anorexia, chest pain, cough, chills, fever or night sweats.

**Abnormal Physical Findings.** There were enlarged submaxillary glands but no other gland enlargement.

**Ears:** There was a generalized scaling dermatitis over the pinna with generalized weeping and seropurulent otorrhea involving the tragus. There was an elevated ulceration of the tragus and cartilaginous portion of the external canal (Fig. 1). The middle ear was destroyed and there was piling up of tissue



FIG. 1. Ulceration of tragus and external canal

in the region of the annulus predominately at the anterior-superior angle. No odor was present. Pain was felt on manipulation of the external ear. Fistula test was negative. There was hearing loss in the left ear.

**Mouth:** Ulcerations were present on the right paramedian raphe of the hard palate and in the region of the uvula and soft palate. They measured 1 X 2 cm. and were shallow, covered with a white membrane and presenting slightly rolled margins.

The nose, nasopharynx, larynx and sinuses revealed no abnormal findings. See X-ray report for chest findings.

**Laboratory Findings.** X-ray-Chest: Extensive infiltration bilaterally in upper lobes compatible with old tuberculosis.

**Mastoids:** Left mastoiditis with prominent sinus plate and areas of rarefaction indicating destructive bone changes.

Urine sugar neg., albumin trace, sed. rate 0 mm. (Quick method).

<sup>1</sup> Second year resident, Baltimore Eye, Ear & Throat Hospital.

<sup>2</sup> Instructor, Johns Hopkins Hospital and associate staff member of Baltimore Eye, Ear & Throat Hospital.

<sup>3</sup> The description of the admission and studies are a summary of the findings at the Baltimore Eye, Ear & Throat Hospital, University Hospital, Johns Hopkins Hospital and Mt. Wilson Hospital.

Blood sugar 99 mg. per cent; alkaline phosphatase and total serum bilirubin negative; hematocrit 43. S.T.S. negative; blood culture negative; purified protein derivative first strength negative; Hgb. 89 per cent; RBC. 5,260,000; WBC. 8,850; lymphs 27 per cent; monocytes four per cent; P.M.N. 67 per cent; eosinophiles five per cent; proteins normal; sputum and stomach washings negative for tuberculosis; old tuberculin 1:1000; cultures of ear and mouth ulcers negative for tuberculosis. Skin tests and complement fixation tests for histoplasmosis, coccidiomycosis, and blastomycosis negative. Biopsy of the mouth ulcers and a second biopsy of the ear granulation revealed tuberculosis (Fig. 2).

**Hospital Course.** The patient was started on PAS and INH with improvement. The mouth ulcers disappeared and the dermatitis of the ear and the ear discharge diminished. A mastoidectomy with complete removal of the tragus and infected portion of the external ear was done in August 1957. A skin graft was placed and the ear remained dry.

**Discussion.** The original biopsy diagnosis of chondrodermatitis nodularis chronica helici did not fit the clinical picture in this case. This entity was originally described as a painful nodular growth of the ear which occurs as a painful firm nodule usually on the rim of the ear. Crusting is often present and the condition may be confused with basal cell carcinoma, squamous cell carcinoma, senile keratosis and precancerous dermatitis. The treatment of choice is surgical excision.

Tuberculosis of the ear is being seen less and less because of the early diagnosis and the efficiency of new drugs. Primary aural tuberculosis is presumed by some to occur in infants and children, but this has been widely disputed. The accepted opinion is that the ear becomes involved by the blood borne infection coming from the hilar glands infected by the Ghon lesion without the lung lesion being visible. Thus the disease may manifest itself only in the ear. The disease may also pass through the eustachian tube. The most frequent presenting complaint is aural discharge without pain. Of course, tuberculous etiology should be suspected in any chronic otitis media in a patient with tuberculosis foci elsewhere. It is generally agreed that aural tuberculosis is secondary to a focus elsewhere. Tuberculosis of the temporal bone frequently heals spontaneously without affecting the primary source of infection.

**Summary.** In a review of the literature no case with a similar onset could be found. The diagnosis

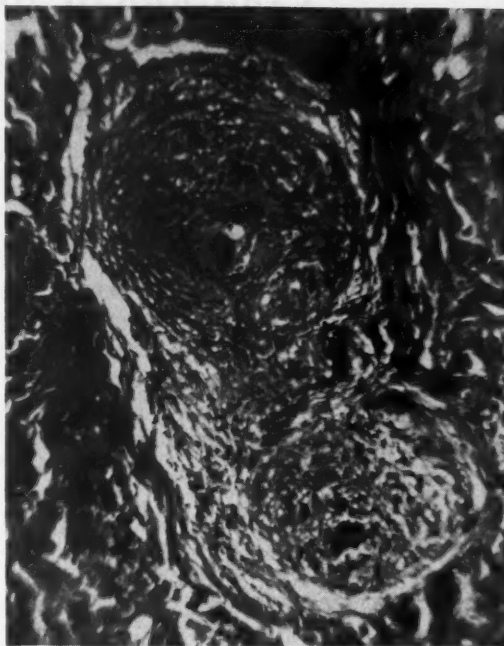


FIG. 2. Biopsy of ear granulation showing typical findings of tuberculosis.

was finally made on the biopsy specimen and under the therapy outlined, the lesions regressed. In any case of ulcerative external otitis, tuberculosis etiology must be considered.

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#### REFERENCES

1. ORMEROD, F. C., *Brit. J. Tuberc.* **48**: 214, 1954.
2. WALLNER, LINDEN J., *Laryngoscope* **63**: 1058, 1953.
3. MCKIBBEN, BYRON G. AND SHEELY, JAMES, U. S. Army, *Arch. Otolaryng.* **65**: 286, 1956.
4. PROCTER, BRUCE AND LINDSAY, J. R., *Arch. Otolaryng.* **34**: 221, 1942.
5. CAROL, W. L. AND VAN HAREN, H. B., *Dermatologica* **83**: 353, 1941.
6. SHUMAN, RICHARD AND HELWIG, ELSON B., *Am. J. Clin. Path.* **24**: 126, 1954.
7. EBENIUS, B., *Acta Radiologica* **22**: 194, 1941.
8. THOMETZ, ROBERT W., *Arch. Otolaryng.* **55**: 153, 1952.
9. NELSON, LAWRENCE M., *Arch. Dermat. & Syph.* **65**: 356, 1952.
10. NEWCOMER, VICTOR D., STEFFEN, CHARLES GEORGE, STERNBERG, THOMAS H. AND LICHTENSTEIN, LOUIS, *Arch. Dermat. & Syph.* **68**: 241, 1953.



## Component Medical Societies



### ALLEGANY-GARRETT COUNTY MEDICAL SOCIETY

LESLIE E. DAUGHERTY, M.D.

*Journal Representative*

#### DR. RANSOM APPOINTS COMMITTEES

Dr. Leland B. Ransom, president of the Allegany-Garrett County Medical Society, has appointed the following committees: a coordinating committee to study schedules for emergencies and other professional problems includes Dr. James H. Feaster, Jr., Oakland, Dr. Hilda J. Walters, Frostburg, and Dr. William P. Iames, Cumberland. An arrangements committee includes Dr. E. Irving Baumgartner, Oakland, Dr. Martin M. Rothstein, Frostburg, and Dr. Frank T. Cawley, Cumberland. A program committee consists of Dr. Carlton Brinsfield, Dr. Samuel M. Jacobson, Dr. L. Lewis Mould, Cumberland, and Dr. Andrew E. Mance, Oakland.

The Society plans to meet on the second Wednesday of each month. On alternate months meetings will be devoted to scientific sessions. On the intervening months meetings will include business, a program and entertainment.

#### FIFTY YEARS AGO

Dr. Mahlon C. Hinebaugh, born June 4, 1865, graduated from the University of Maryland in 1892



Dr. and Mrs. Mahlon C. Hinebaugh, Oakland, Md. start out for a house call

and joined the Medical and Chirurgical Faculty in 1899. He married Eva Todd Robinson, of Baltimore, and was a Democrat, Lutheran and a member of the town council of Oakland in 1919-1946. Dr. Hinebaugh established one of the first hospitals in Garrett County. He died January 12, 1946.

#### PERSONALS

Dr. Alexander J. Mozzer, Cumberland, has resigned from the Western Maryland Railroad as examiner and has accepted a position with the Bethlehem Steel Corporation in the medical department.

Dr. John A. Topper, Hyndman, Pa., discussed "Parenthood" to the Young Adult Bible Class in the Christian Church recently. He stressed that by having a knowledge of the normal growth and development of a child the parents can better understand how to handle their children.

Dr. F. A. G. Murray, Cumberland, who has been in semi-retirement, is ill at his home in Narrows Park.

Dr. Richard Leighton has opened an office for the practice of medicine in Oakland. Dr. Leighton is a graduate of the University of Maryland class of 1955 and served his internship at the University Hospital. He recently returned from a tour of duty with the United States Navy and will be associated with his brother, Dr. Herbert H. Leighton.

Taking part in a panel discussion on "Changes and Trends in Medicine" at a recent meeting of the Gephart School Parent Teacher Association in Cumberland, were Dr. Carlton Brinsfield representing surgery and Dr. George Simons representing medicine.

*A doctor of medicine may think one thing  
and feel another.*

—A. E. HERTZLER, M.D.

### BALTIMORE CITY MEDICAL SOCIETY

CONRAD ACTON, M.D.

*Journal Representative*

President Samuel Whitehouse called the Baltimore City Medical Society to order on Friday, January 2, 1959, for the first meeting of his administra-



tion. Approximately 100 members attended the meeting, held in the wake of New Year celebrations.

Reading of the minutes of the preceding meeting was dispensed with quickly. Election of 20 new members by written ballots was accomplished.

President Whitehouse then introduced Dr. A. Earl Walker, moderator of a panel discussion on subarachnoid hemorrhage. Dr. Walker in turn introduced the panel members: Drs. Charles Van Buskirk, director, Division of Neurology, University of Maryland; James H. Arnold, Jr., professor of neurological surgery and head of the Division of Neurological Surgery, University of Maryland; Neal I. Aronson, assistant professor of neurological surgery, Johns Hopkins University; and J. W. Magladery, associate professor of neurological medicine, Johns Hopkins University. An additional member of the panel, Dr. Frank J. Otenasek, assistant professor of neurological surgery, Johns Hopkins University, was unable to be present because of illness. His assigned topic was divided among the other panel members.

Dr. Walker, professor of neurological surgery and neurological surgeon in charge at Johns Hopkins University, opened the panel session with a general discussion. He called attention to the fact that neurologists seem to call subarachnoid hemorrhage what neurological surgeons refer to in *their* literature as congenital aneurysms. He also pointed out the significance of the time factor in comparison of medical and surgical mortality.

Dr. Van Buskirk discussed the clinical diagnosis of subarachnoid hemorrhage with a convenient outline of how to distinguish between a subarachnoid hemorrhage and a bloody spinal tap. He reviewed the symptoms pertinent to both and the major etiologies underlying subarachnoid hemorrhage.

Dr. James G. Arnold, Jr., spoke about the timing of cerebral angiography. He told of the history of angiograms in Baltimore as he had seen it develop, commenting wryly on his first attempt in 1937 to do one. He recommended that angiograms be done early; if possible, on first arrival of the patient. He prefers to have them done under general anesthesia if clear pictures are to be had. He also mentioned that where the routine carotid route is unproductive of positive findings it is worthwhile to do angiograms by the vertebral route. He gave case histories of several patients with his operative results when immediate angiography and operation had been done for acute hemorrhage.

Dr. Neal I. Aronson outlined indications for and against the "direct attack" in selected instances, particularly when the aneurysm is located on the internal carotid artery or where an arterio-cavernous fistula has occurred. He illustrated a special Silverstone clamp which can be applied for gradual occlusion of an internal carotid artery over a period of several days. The clamp seemed most ingenious. Because of recurrences, or "rebleeding rate," he preferred internal carotid ligation to a common carotid ligation. Danger of injury to the intima was mentioned.

Dr. Walker, as his share of Dr. Otenasek's assignment, spoke on intracranial techniques, which require as much room as possible. Avoidance of retractor trauma to brain tissue is most important. Increased space for surgery can be gained by hypotensive and hypothermic techniques. Intravenous urea is effective in producing temporary brain shrinkage to give room for manipulation. He then presented a diagram showing how clips could be applied to aneurysms in various locations. Where this is not feasible the aneurysms are wrapped with muscle, which forms scar tissue and contracts to delimit the lesion.

Dr. J. W. Magladery, anchor man of the evening, presented the overall prognosis with a review of the literature, not only in this country, but abroad. Dr. Magladery claimed to be old-fashioned and to look on the problem not as one of the aneurysms alone, but of subarachnoid bleeding. Prognosis affecting factors of "this dreary subject" are age, blood pressure and history of prior bleeding. He noted that an idea seemed to prevail among neurologists that an early angiogram was less likely to show the aneurysm, although he gave great credit to the neurosurgeons for brave attempts to save their patients in this manner. He noted that the "natural" mortality rate as extracted from world literature seemed to be about the same at Johns Hopkins as at other hospitals. Attempts by surgeons in Scandinavia, England and this country to obtain a mortality rate less than that of nature had not, in his opinion, proved out. Although he conceded that late operations seem to offer greater survival, rebleeding or recurrence does happen. His pessimistic conclusion was, "if we select, how do we?"

After the panel's presentation, questions from the panel and the floor were requested. The hour was late and none were offered.

Following the meeting refreshments provided by

the Woman's Auxiliary and served by Ellen Gordon were enjoyed by many.

#### EXECUTIVE BOARD

On Tuesday, January 13 President Samuel Whitehouse convened the first meeting of the Executive Board under his regime. A formidable agenda of 16 items was disposed of in the record time of two hours. The investigation of new members was considered. The customs of the Society were given in detail to the "freshmen" of the Board, Drs. Goldsborough, Howard and Acton, on this matter, and many other items, so they would have the benefit of the perspective of the more experienced members.

An interesting reversal of procedure was encountered with the higher echelons. The Faculty requests that all matters for consideration by its committees be sent to the Faculty Executive Committee for allocation to a committee. On the other hand, the American Medical Association, on receipt of Dr. Morrison's Resolution No. 2, requested that communications be sent directly to an appropriate committee and *not* to the A.M.A. Executive Board. These items in the expedition of business matters are learned only by experience.

A letter from Dr. Howard Mays to the Maryland Hospital and Medical Services, Inc. received considerable approval from the Executive Board. Dr. Mays took the Blue Cross and Blue Shield severely to task for its share of newspaper publicity concerning lower fees to be charged patients in older age groups. He feels that this was publicized without consultation or conference with physicians or their representative bodies, thus creating an unfavorable publicity background for any negotiation. In reply, Mr. Dabney's letter stated that the initial releases had been given out at the A.M.A. and National Blue Cross Association headquarters and that the Maryland branch merely followed the line established further up. The Executive Board elected to forward Dr. Mays' letter to the Faculty Council with a request for better liaison with the component societies before such releases in the future.

A resolution from the East Baltimore Medical Society calls for better representation of general practitioners in the elective offices of the Baltimore City Medical Society. The Executive Board was grateful for such a good sign of awakening interest

by general practitioners in their Society. The secretary was directed to write a letter of appreciation and to enclose a list of committees with the request that members of the East Baltimore Medical Society who wish to help submit their names. From work on the committees the sincerity and interest of members in the Society can be shown, their ability made known, and selection can be made for nomination to elective office. It has been a concern of the Executive Board that general practitioners tend to stay away from Society meetings and are generally unwilling to constructively help with the Society's business. It is hoped that this resolution represents a turn of the tide and that more and more general practitioners will interest themselves in this Society that represents their interests with the public.

Dr. Sullins Sullivan came to discuss the recommendations of his Magistrates Committee with the Executive Board. The committee report as submitted at the annual business meeting had not been approved entirely. After Dr. Sullivan masterfully presented the facts underlying the recommendations his committee report was approved. The secretary was directed to send copies of the report and its approval to the Department of Public Welfare, Mayor and City Council, and police commissioner.

The Executive Board after some discussion decided not to give a cocktail party preceding the presidential dinner at the Annual Meeting of the Faculty. The grapevine had disclosed that the Faculty itself plans to take over this affair. It is regretted that the City Society is deprived of one of its more gracious and hospitable gestures to its fellow component societies.

Dr. Classen presented a resolution regarding the hazards of tetanus antitoxin. This carefully worded paper is designed to bring to the attention of all physicians the hazard of indiscriminate administration of horse serum antitoxin to people suffering from injury. Benefits and safety of prophylactic tetanus toxoid are emphasized and encouraged. The Executive Board approved the resolution and it will be brought before the entire society.

Proposed for emeritus membership were Dr. Henry F. Buettner, a member of the City Society for 39 years and who is now retired, and Dr. Charles L. Warner, a member of the society for 32 years, who also is retired.



## BALTIMORE COUNTY MEDICAL ASSOCIATION

CHARLES HERMAN WILLIAMS,  
M.D.

*Journal Representative*

The regular meeting of the Baltimore County Medical Association was held Wednesday, December 17, 1958 at the Park Plaza Hotel, with President Clarence E. McWilliams presiding.

After luncheon the meeting was called to order and the minutes of the November 19 meeting were approved as published. The minutes of the meeting held October 15 were corrected as follows: in Dr. Pillsbury's report, page two, paragraph five, the word *restrict* was substituted for the word *curtail*.

Dr. Reese introduced the speaker, Dr. Edmund Bradley, chairman of the Department of Pediatrics, University of Maryland School of Medicine. Dr. Bradley's topic was "Staphylococcal Pneumonia." Following his address there was a question and answer period.

Dr. O'Donnell reported that the Planning Committee of the Medical and Chirurgical Faculty, at the request of the Council, will set up some method for annual or biannual relicensing of physicians. He stated that this does not mean examinations. The method will be released by the State Board of Medical Examiners. The reason for this plan is that the board does not know how many doctors are practicing in the State of Maryland. This will prevent a doctor from leaving the state for 20 years and returning to start practice again. Dr. O'Donnell advised that approximately 38 states require annual or biannual registration. He said that the members should consider this and be ready to instruct the delegates at the proper time. It is estimated that the fee for relicensing will be one or two dollars.

Dr. McWilliams again announced that the deadline for listing in the Medical Directory is January 1, 1959. He requested the cooperation of those members who have not yet advised the chairman of the committee, Dr. Kasik, of their correct listing.

Dr. Scalia thanked all the doctors for their cooperation in the TB skin testing program being conducted by the Health Department. He advised that several schools have already been completed

and the program will continue after the holidays. Dr. Scalia stated that if students report to their physician for skin tests the Health Department is doing intradermal tests. The student should have a form which should be completed and returned to the Towson office.

The following new members were accepted for active membership: Drs. Donald O. Wood, Timonium, and Donald S. Carter, Towson. Drs. Roger S. Waterman, Randallstown, Joseph T. Michels, Towson, and George Ramapuram, Pikesville, were accepted for affiliate membership.

Dr. McWilliams announced that Dr. Everett S. Diggs has resigned as secretary of the Medical and Chirurgical Faculty and will succeed Dr. Frank J. Geraghty as councilor. Dr. William Carl Ebeling was elected to fill Dr. Diggs' term.

## CARROLL COUNTY MEDICAL SOCIETY

JULIUS CHEPKO, M.D.

*Journal Representative*

The first meeting of the Carroll County Medical Society in 1959 was held January 7 at the Hoffmann Inn in Westminster. An instructive discourse was given by Dr. Moses Gellman on "Hip Conditions in Children." He illustrated his talk with many appropriate roentgenograms.

Dr. Gellman pointed out that hip conditions in children may be divided into the following five groups: congenital, infections, injuries, degenerative and developmental, and miscellaneous.

Concerning the congenital conditions he gave three criteria for diagnosing dysplasias of the hip: first, differences in contour of the acetabular roof; second, inequality in size of capital epiphyses of hips; third, dislocation. The sooner the congenital deformity is discovered and treatment instituted, the better the reconstituted result as to function, provided nature does not alter circulation into the hip and cause the head of the femur to be malformed.

The infection category encompasses tubercular, osteomyelitis and Perthes' diseases.

The most common injury to hips in children, Dr. Gellman stated, is slipped epiphysis. Androgens are used to facilitate their closure.

A black and white photograph featuring the word "ACHROMY" repeated in a bold, three-dimensional, blocky typeface. The letters are arranged in a staggered, overlapping pattern that creates a strong sense of depth and perspective. The lighting is dramatic, casting deep shadows and highlighting the edges of the letters, which appear to be floating or stacked. The overall effect is a rhythmic, almost hypnotic visual of the same word from multiple angles and positions.

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Following this enlightening lecture, the annual election of officers was held. The officers for the next 12 months will be:

*President:* DR. C. L. BILLINGSLEA

*Vice President:* DR. WILBUR H. FOARD

*Secretary-Treasurer:* DR. DANIEL WELLIVER

*Journal Representative:* DR. M. E. ROBERTSON

*Board of Censors:* DR. ALLAN MOULTON, DR. DANIEL WELLIVER, DR. MORRELL MASTIN

*Delegate:* DR. E. A. THOMPSON

*Alternate Delegate:* DR. W. G. SPEICHER

### FREDERICK COUNTY MEDICAL SOCIETY

LOUIS R. SCHOOLMAN, M.D.

*Journal Representative*

The regular monthly meeting of the Society was held at the Francis Scott Key Hotel. The guest speakers were Dr. Howard Bubert, a Baltimore City member of the Council of the Faculty, and John Sargeant. Dr. Bubert discussed in a general way some of the financial problems of the Faculty. Mr. Sargeant announced that the *Maryland State Medical Journal* was now being published out of the red. He then spoke of a discussion with a labor group in relation to closed panel medical groups and freedom of choice of physician.

At the beginning of the business session Dr. Jesse Fifer, the retiring president, turned over the gavel to the new president, Dr. Henry Chase. The proposed new constitution and bylaws which had been read at the November meeting was discussed. The Society directed the constitution committee to make the necessary revisions after considering any corrections or suggestions which might be submitted by members.

### HARFORD COUNTY MEDICAL SOCIETY

FREDERICK J. HATEM, M.D.

*Journal Representative*

At the meeting of the Society on December 18, 1958, the following officers were elected for the year 1959:

*President:* DR. PHILIP W. HEUMAN, Belair

*Vice President:* DR. EDWARD LOO, Havre de Grace

*Secretary-Treasurer:* DR. I. RANDALL ROSS, Havre de Grace

*Delegate:* DR. M. DUDLEY PHILLIPS, Darlington

*Alternate Delegate:* DR. ROBERT BARTHEL, Forest Hill

*Planning Committee:* DR. J. RALPH HORKY, Churchville

A vote of thanks was extended to the outgoing officers, Dr. Richard Norment, president, and Dr. William K. Brendle, secretary-treasurer, for the excellent job done by them in reviewing and organizing the minutes and records of the Society. The program committee was commended for the excellence of the scientific programs during the year.

The speaker of the evening, Dr. Russell Fisher, state medical examiner, gave an excellent talk and showed slides depicting the work and problems of his department.

### HOSPITAL NOTES

The staff of the Harford Memorial Hospital elected the following officers for the year 1959:

*President and Chief of Staff:* DR. FREDERICK J. HATEM

*Vice President:* DR. BARRY J. PLUNKETT

*Secretary-Treasurer:* DR. WILFORD A. H. COUNCILL, Jr.

### TALBOT COUNTY MEDICAL SOCIETY

JOHN N. ROBINSON, M.D.

*Journal Representative*

At the annual meeting held December 17, 1958, the following officers were reelected for 1959:

*President:* DR. ARTHUR B. CECIL, JR.

*First Vice President:* DR. JOHN S. GREEN, III

*Second Vice President:* DR. GUY M. REESER

*Secretary-Treasurer:* DR. LOUIS S. WELTY

*Delegate:* DR. THURSTON HARRISON

*Alternate:* DR. JAMES H. P. GARNETT

A letter congratulating the Talbot County Humane Society on the steps they have taken to have condemned animals turned over to medical research was approved.

On March 1 our emergency telephone call system will begin to operate. The telephone number is Talbot 2-0494. It is listed in the telephone directory. We believe that this service will help patients locate

their own doctors in emergencies and also help those who do not have a doctor to find one when needed.

On January 15 the members journeyed to the Brick Hotel in Denton for the dinner meeting of the Four County Medical Society and heard an excellent presentation by Dr. Nathan Needle, "The Generalist in Heart Disease."

Dr. Harry Walsh's membership was transferred to the Talbot County Medical Society from Nassau County N.Y.

### WICOMICO COUNTY MEDICAL SOCIETY

RAYMOND M. YOW, M.D.

*Journal Representative*

At the January meeting of the Wicomico County Medical Society, Dr. Joseph Workman, assistant professor of medicine and head of the Division of Radioisotopes of the Department of Medicine, University of Maryland School of Medicine, gave a talk discussing "Clinical Applications of Radioisotopes." Dr. Workman discussed the practical application of radioisotopes as it pertains to a small community hospital outside of the teaching institutions. Dr. Workman's discussion was received enthusiastically by all members of the Society.

The Society has recently welcomed the return of Dr. Harold Eccleston, of the Department of Anesthesiology, Peninsula General Hospital, following a brief leave of absence. New members taken into the Wicomico County Society are: Dr. Henry G. Reeves,

Dr. Stephen Tymkiw and Dr. Leonid Muldave. Dr. Reeves has recently entered into the practice of surgery; Dr. Tymkiw has joined the Department of Pathology of the Peninsula General Hospital, and Dr. Muldave is a staff physician of Deershead Hospital, Salisbury, Md.

At the December meeting of the Wicomico County Medical Society, the officers for 1959 were elected. Dr. Hunter R. Mann, Jr., was elected to serve as president. Dr. Theodore S. Smith was elected vice president, and Dr. James P. Gallaher will serve as secretary-treasurer. Dr. Mann is engaged in the practice of general surgery in Salisbury; Dr. Smith is an anesthesiologist; Dr. Gallaher is engaged in the practice of obstetrics and gynecology.

The Wicomico County Society lost one of its senior members in December, with the passing of Dr. William Emrick, of Hebron, Md. Dr. Emrick had been an active member in the Wicomico County Medical Society and served his community faithfully for many years. Funeral services for Dr. Emrick were held on December 18, 1958.

The Peninsula General Hospital, Salisbury, Md., has recently acquired an electroencephalograph machine. Its purchase was made possible through the efforts of the Salisbury Junior Chamber of Commerce and the Wicomico Epileptic Society. It cost 4,200 dollars. At the time of its installation, it was the only E.E.G. machine in the state of Maryland, outside of Baltimore City. Since its installation in October 1958, more than 100 patients have received the benefits of its use.

## *It's Time to Plan Now!!*

for

Wednesday, Thursday, and Friday, April 15, 16 and 17, 1959

**ANNUAL MEETING OF THE  
MEDICAL AND CHIRURGICAL FACULTY**

**The Alcazar, Cathedral & Madison Sts., Baltimore, Md.**



## Obituaries



### *Robert W. Ard, M.D.*

1924-1958

Dr. Robert W. Ard, of Hagerstown, was killed in an automobile accident December 20, 1958. He was 34.

The son of the Rev. Dr. and Mrs. Wilson P. Ard, he was born in Bellefonte, Pa. He graduated cum laude from the College of Medicine, University of the State of New York, Syracuse, N.Y. and interned with the United States Public Health Service.

After three years in the medical corps of the United States Navy as a flight surgeon, Dr. Ard studied and practiced radiology for a year at Geisinger Hospital, Danville, Pa. He spent two years in specialized training and study in internal medicine at the Veterans General Hospital at Perry Point and the University of Maryland Hospital.

Dr. Ard opened his office in Hagerstown in September, 1957 and was on the staff of the Washington County Hospital. He was a member of the Washington County Medical Society.

Surviving the young doctor are his parents, his wife, Barbara Ann, and four children.

### *Benjamin Miller, M.D.*

1901-1958

Death came to Dr. Benjamin Miller on December 24, 1958 after two years of illness. This 57 year old physician was born in Baltimore and educated at Baltimore City College, Mount Vernon College of Surgeons and the University of Maryland Medical School.

He began practicing in 1925 and maintained an office at 2030 Wilkens Avenue. He was dedicated to the practice of medicine and was beloved by all whom he served.

Dr. Miller organized the Internes Alumni of Lutheran Hospital, which later became the West Baltimore Medical Society. He was a member of the Baltimore City Medical Society and the American Academy of General Practice until illness forced his inactivity.

Surviving Dr. Miller are his wife, Goldie, a son, Gerald, who is a medical school student, and a daughter, Mrs. Natalie Wilder, as well as two brothers and three sisters.



"Death is the port where all may  
refuge find,

The end of labor, entry into rest."

*William Alexander,*  
EARL OF STIRLING





# CIVIL DEFENSE

I. RIDGEWAY TRIMBLE, M.D.

*Chairman, Committee on National  
Emergency Medical Service*

EDITOR

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## THE PHYSICIAN'S ROLE IN CIVIL DEFENSE

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I. RIDGEWAY TRIMBLE, M.D.

A series of articles will appear in this *Journal* for guidance of the medical profession in both national and local disasters with every effort to make the presentation as practical as possible. Such a program has two phases: the first, that of plans and training for an emergency, the second, that of implementation of these plans when the emergency occurs. All plans should be based on simplicity, mobility and adaptability, with the purpose in mind that what is applicable to a minor disaster can be made applicable to a major disaster. Your consideration is particularly requested of two innovations which will be described in this first article, the formation in Maryland of individual emergency medical teams and the new communications center at the Medical and Chirurgical Faculty building.

Perhaps the greatest danger to this country in the event of an enemy attack lies in the fact that we may become discouraged and demoralized because we are so unused to hardships and suffering. The great masses of the only nation with present capabilities to attack us are accustomed to living without central heating, without electricity, telephones, motor transport or good food. They have survived recent enemy devastation of their country. They are tough. We are soft. We must, therefore, prepare ourselves psychologically as well as physically as best we can against enemy attack. We have as a nation great ingenuity and innate courage. We must not panic. We must never give in. We must prepare to withstand the blow which, in addition to the initial list of dead and of sick and wounded, will bring a hazardous and primitive existence for an indefinite period for those who survive.

The purpose of Civil Defense, as well as defense against minor disasters, is not only to save as many lives and as much property as possible, but also to help the survivors to struggle to their feet in the quickest possible time in order to re-establish their

livelihood, and, if necessary, furnish the materials and weapons to carry the war to the enemy.

When need comes to Maryland for the emergency care of large numbers of sick and wounded, whether incurred by industrial disaster or by enemy action, the public will turn first to the medical profession and expect it to be ready. As yet this profession is not properly ready in Maryland. This has been a continuing source of dissatisfaction and worry to the Committee on National Emergency Medical Service of the Medical and Chirurgical Faculty.

One reason for this lack of progress is not lack of ability or enthusiasm or industry on the part of the director of civil defense in Maryland and his deputies in the various counties and cities, but an inability of the country at large to recognize the bigness and the priority of the problem. Those in charge of our Civil Defense are a pitifully small fulltime group, paid, on the average, a small salary and given almost no staff of assistants. They are supplemented by a number of volunteers. The medical directors of Civil Defense, are almost all members of the various boards of health, who are expected to carry out a program of "defense" in addition to their regular duties. What the whole national program needs is an allocation of funds and personnel on a fulltime basis and on a scale commensurate with the size and urgency of the problem. The United States has given away more than 50 billion dollars in foreign aid since World War II, yet allocates a mere pittance to a program of defense at home, which could mean the annihilation or the survival of ourselves and, what is more important, our children. The attack, if it comes, will for military reasons most likely come in the spring or summer months; it may even come this spring, at the end of the six months' warning.

In spite of the handicaps mentioned above, some encouraging progress along medical lines in Civil Defense has been made in Maryland, and should be

reviewed together with projected future plans. Criticisms and suggestions are invited by the committee.

### NATIONAL DISASTER PLAN

The very latest National Plan from the Office of Defense and Civilian Mobilization, published in October 1958 and signed by President Eisenhower, states in its first two paragraphs:

#### I. PLANNING BASIS

Three contingencies most directly affecting civil defense and defense mobilization are international tension, limited war and general war.

##### A. International Tension

It is assumed that periods of extreme international tension may occur. In such cases, when the President or the Congress finds that the national security demands the invocation of extraordinary authority for civil defense programs short of the declaration of a civil defense emergency, civil defense and defense mobilization measures would be accelerated.

##### B. Limited War

It is assumed that limited wars may occur in various parts of the world. Depending on the size of forces involved, duration of hostilities, kinds of weapons used and degree of U.S. involvement, such limited wars may require degrees of mobilization of U.S. resources, production and manpower, and acceleration of U.S. nonmilitary defense as a matter of prudence.

##### C. General War

It is assumed, in the absence of international agreement, that weapons employed in an attack against the United States would be predominantly of multimegaton yield. The use of biological and chemical agents is possible. Delivery systems in the next few years would be predominantly man-operated, with a resulting probable maximum tactical warning of initial attack of three hours for the nation as a whole; thereafter, delivery systems would be predominantly unmanned, with maximum tactical warning of initial attack reduced to one half hour for the nation as a whole. **AT ANY TIME DURING THIS PERIOD, ATTACK COULD COME WITH NO TACTICAL WARNING.**

Strategic warning is a possibility.

#### II. MISSION

The national defense objective is to deter either limited or general war or, if deterrence fails, to prosecute the war successfully and recover from it.

Within this objective, and as an integral part of the total defense of the nation, the mission of civil defense mobilization is: 1. Protection of life and property by preparing for and carrying out nonmilitary functions to prevent, minimize, repair and recover from injury and damage. 2. Mobilization and management of resources and production.

The thermonuclear age has put greater stress than ever on what has always been a basic tenet of civil defense; that it begins at home, in the local community. This puts the real premium on the individual, in our case the individual doctor.

In a disaster the physician will be called on not only to render medical aid but also to "command" in a limited but positive way. He must be prepared for this duty by learning what to advise people as precautionary measures before the disaster and by rendering effective aid after a disaster has occurred.

The information given in this series of articles will attempt to describe some of the basic procedures in defense preparation, then describe the duties of a physician or a member of another allied medical service (such as a nurse, dentist, pharmacist, veterinarian, and mortician), working up through the line of evacuation through the individual doctor, then the emergency team, the first aid station, the emergency treatment station, the present hospital, and the emergency hospital.

As a starting point we will consider the five basic preparations against an attack as outlined by Leo A. Hoegh, director of Civil Defense and Defense Mobilization:

1. You must know the warning signals and what they mean.
2. You ought to know your community's emergency plan.
3. You should know first aid and home preparedness. You should have a first aid kit and know how to use it. You should know how to take care of yourself. Doctors probably won't be available the first 24 hours or even longer.
4. You ought to know how to protect yourself from radioactive fallout.
5. You ought to know Conelrad—640 and 1240 on your radio dial. From then on you'll get instructions and information.

These are the five points you must know to survive.

The first and fifth points are considered together: Warning Signal in National Disaster.

A. Where outdoor warning signals are used to warn the public, they will consist only of:

1. The ALERT signal—A three to five minute steady blast or tone, meaning "attack is probable—take action as directed by local governments."
2. The TAKE COVER signal—A three minute "warbling" tone or a series of short blasts meaning "attack is imminent—take cover immediately in the best available shelter."

If you are listening to any radio or television set when the alert sounds, you will hear a message like this:

"We interrupt our normal program to cooperate in security and civil defense measures as requested by the United States Government. . . . This is a Conelrad radio alert. . . . Listen carefully: This station is now leaving the air. During the Conelrad alert there will be no FM or TV programs. The only program on the air will be on your standard radio at 640 or 1240 kilocycles, beginning after a short period of silence. Be patient. Tune the dial of your standard radio receiver to 640 or 1240."

If you are NOT listening to a radio or TV set when this announcement is made, you will know the Conelrad system has gone into operation when you hear the civil defense sirens or attack warning signals. . . . Tune your AM (Standard) radio immediately to the proper dial setting—640 or 1240—and listen for the official broadcast.

**REMEMBER:** When an alert sounds, ALL NORMAL BROADCASTING WILL CEASE.

After a short period of silence, Conelrad stations will return to the air at 640 or 1240 kilocycles on your standard AM radio. This off-the-air period is due to necessary broadcasting equipment changes. Its length will vary for different areas.

The system is officially entitled "Plan for CONTROL of ELECTromagnetic RADIation"—Conelrad for short. It is a system devised by the broadcasting industry and the government working together to bring you official information and civil defense instruction in times of emergency. Without it enemy bombers could tune their direction finders to a station broadcasting in a target city and beam right in to their targets.

#### COMMUNITY'S EMERGENCY PLAN

The National Plan, already quoted, states specifically:

##### *Action on Warning in National Disaster*

a. Governments and the public will take such action on receipt of warning as is prescribed by the government involved.

(1) Evacuation or dispersal—Target cities and other areas near assumed targets will, if time and conditions permit, execute plans for evacuation or dispersal to prepared reception areas.

(2) Shelter—If time and conditions do not permit evacuation, full advantage will be taken of existing shelter, and fallout protection will be improvised.

(3) LOCAL ACTION TO BE TAKEN IS A LOCAL DECISION.

##### *Shelter*

Every home and every place of business should have a shelter area. In the home shelter area there

should not only be sleeping arrangements, but there should be a two weeks' supply of water and pre-cooked foods for your family, including plenty of water, fruit juices and canned foods. In addition, there should be a battery operated radio, a flashlight, a first aid kit, stove for heat and cooking, blankets, metal containers for garbage and human excreta.

Actual plans for a shelter, whether outside in the yard, in the cellar, on the first floor, in an apartment or in an office building, can be obtained in pamphlets from the local civil defense director or by writing to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

In dealing with home preparedness and home protection, including protection from the radioactive fallout, Mr. Hoegh states:

The bathroom is a good room for a refuge. You can even leave your food in the kitchen and get it when you need it. It's important to get to the interior part of the building or even the interior corridors. You'll get adequate protection from radioactive fallout there. Stay away from windows; radiation will seep right through. Put as much mass weight as possible between you and the fallout. Get off the top floor; get down two or three floors, if possible.

Most homes have basements either totally or partially underground and that will afford immediate protection from all sides except from the top. Therefore, even in case of a blast, if you're down in a basement, you've got some protection. The trouble is that your house, if it's too close to ground zero, will collapse on you. Therefore it's important that you have a reinforced ceiling in part of the basement. It will also protect you from radiation.

For instance, in the basement of the home that I recently acquired I'm going to have another ceiling built of concrete blocks. That's mass weight. That'll make that part of my basement adequate. I have two window wells that will have to be covered up with sandbags. This will stop the radiation from coming in. That type of ceiling will reduce radiation to 1/100 of what it is outside. The cost, including steel bars for reinforcing, is only about 200 dollars. A normal basement with a reinforced roof can provide good protection.

In homes without a basement, if you have a garage, strengthen it. If it's built of concrete blocks, put up another layer of concrete blocks to give double thickness. Then put concrete blocks overhead.

#### LINE OF EVACUATION

The line of evacuation of the sick and wounded will be from the first aid station, to the emergency treatment station, to the emergency hospital. The next article will describe the organization and plans of these installations.

It should be stated here, however, that all existing

hospitals should have their disaster plan brought up to date, and they should go further than this. They should have periodic practice alerts. Such trials could be run without affecting the daily routine to any appreciable extent and still be invaluable for staff instruction and discipline. At the very least, every member of the working force of a hospital should have and should know his designated "battle station." The staff of each hospital now operating in Maryland should know the emergency location of that hospital in case the present facilities are destroyed. Such a list will be published in a subsequent article.

Mention should be made here of the new 200 bed civil defense emergency hospitals. Twenty-three of these have been secured here in Maryland from the Federal Government through matching funds. Twenty are stored at the Springfield State Hospital, and one each in Cambridge, Frederick and La Plata. Your committee has, for over a year, strongly urged that these crated hospitals be dispersed throughout the state in accordance with a strategic plan in order that they may become available for training purposes and immediate use if necessary. It has just been announced that during 1959 there will be 50 of these hospitals in Maryland and that they will be strategically located.

Through the efforts of the Maryland Civil Defense Agency, the equipment for one of these 200 bed emergency hospitals has been brought to the Montebello State Hospital as a civil defense emergency hospital training center under the control of the reserve medical officers of the 305th General Hospital, U. S. A. R. The dedication of this center took place January 15, 1959. The hospital supplies and equipment are unpacked there and arranged in accordance with the plan of these hospitals. It is hoped that other areas in the state can have such hospitals for this same purpose.

#### MEDICAL EMERGENCY TEAMS

In Maryland small, highly mobile emergency teams are being organized by the Committee on National Emergency Medical Service of the Medical and Chirurgical Faculty. Each team will consist of a physician and three assistants and have its own automobile available for instant use. These assistants must have had acceptable nursing training or training in first aid. They must live or work near the physician. Such a requirement may mean that a

physician has a night team that live near his home and a day team that live near his office.

Each physician will be responsible for his team's level of training and for immediate notification of the team when called. Plans are now completed for instruction of these teams in first aid through the assistance of the American Red Cross. It is planned to furnish each team with a basic instrument set and dressings as soon as possible. In the meantime, it would be wise for each team to have a small emergency kit of this sort in the trunk of the automobile at all times.

Teams will be registered in the name of the physician and will be given a special number. An identification card will be furnished to all members and a special sticker for the windshield of each automobile. A list of all teams will be filed in our headquarters at the Medical and Chirurgical Faculty building at 1211 Cathedral Street, Baltimore.

Control of these teams will be by the Committee on National Emergency Medical Service of this association, but they will be made available for any major disaster for which calls might come from any city or county within the state through medical channels: Police Department, Fire Department, American Red Cross or Civil Defense.

At the present time, until the "wrinkles" in the plan can be ironed out, the physicians who will form the teams must either live in the city of Baltimore or have their offices there. After these first teams are organized, more will be formed in each county because, with Baltimore a well known "target" city, the teams in the counties may be the only ones available for duty.

Service on these teams will not conflict with a previous assignment. For example, suppose a doctor has already been assigned for emergency duty to some specific hospital under a disaster plan. Under this team plan he will be sent with his team to that hospital if that hospital is called to emergency duty. However, if that hospital is not called or is so badly damaged as to be inoperable, the team will be available for duty elsewhere. Moreover, if a large emergency hospital were suddenly needed at some point, the medical staff could quickly be supplied by calling out the required number of teams.

Physicians who live in Baltimore or who have offices in Baltimore and are willing to help form these medical emergency teams are requested to contact by phone or mail the headquarters at the



Medical and Chirurgical Faculty building immediately.

#### COMMUNICATIONS CENTER

A telephone switchboard is being installed at the Faculty building. In addition to five outside lines for ordinary business of the Faculty, there will be one line for the sole purpose of awaiting possible calls for the emergency teams. This line will have an unlisted number known only to our headquarters, the Fire Department, the Police Department, the Red Cross, Civilian Defense, and the captains of the emergency teams. This single line will be covered by an operator 24 hours a day, seven days a week.

In addition, a radio is being installed at the Faculty building by Civil Defense for use on specified short wave channels in order to establish constant communication between our headquarters in the building with field headquarters at the site of an emergency.

#### THE COMMITTEE ON NATIONAL EMERGENCY MEDICAL SERVICE, MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND

DR. JOHN E. ADAMS

DR. JOHN G. BALL

DR. HENRY F. GRAFF

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DR. PHILIP WHITTLESEY

DR. HUNTINGTON WILLIAMS

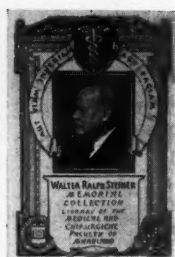
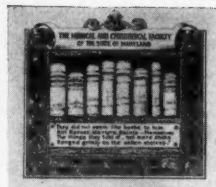
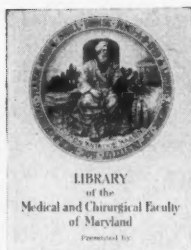
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APRIL 15, 16, 17

THE ALCAZAR

Baltimore, Md.

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## Library

Louise D. C. King Librarian

"Books shall be thy companions; bookcases and shelves,  
thy pleasure-nooks and gardens." *Ibn Tibbon*

LIBRARY HOURS: Monday through Friday 9 a.m. to 5 p.m.  
PARKING AVAILABLE IN REAR OF BUILDING

*Now faith is the substance of things hoped for, the  
evidence of things not seen.*

*Hebrews XI: 1*

### FAITH

If you are one of those fortunate ones, you have often had people say to you, "I wish I had your faith."

You do have it; everyone has faith, perhaps without being aware of it. You have faith in the very air you breathe; in the soft protection of night; the reality of day and the familiar pattern of the changing seasons; the warmth of the sun; the refreshing rain and the soft snow which covers the naked earth. All are accepted without much thought. We believe, we know each will come at the appointed hour. Most of us also accept on faith the touch of a friendly hand and the love of those dear to us. None of these are completely explained by science, for no matter what tenet you believe is responsible for the world as we know it, even that beginning had its origin. Faith in a Higher Power is expressed in many forms by various peoples and a small part of this power is transmitted to human beings that they might help one another.

It takes so little to engender a child's faith and less to destroy it. Perhaps that is the real reason faith in other human beings dies a little with each

added year of life; it is gradually killed before full bloom. There is no more desolate existence than the man who lives with his own intelligence as a prop, whose life is bounded only by what his own mind may grasp.

That faith still works miracles is indubitably true. Love and faith still overcome seemingly insurmountable obstacles. Who among us has not felt better, spiritually and physically, for the smile that warms us, the hand clasp of sympathy and the healing presence of a physician in whom we have faith? Do not ridicule his "bedside manner." If it comes from the heart, you have received the most precious gifts one human can give another, Faith, Hope and Love.

That your doctor should have knowledge of his profession and skill in its execution is true, but this is not all needed in the battle for better health. Faith in his will and power to help you will give you strength, many times superhuman strength, that you may both work toward your healing.

Let us not in our zeal toward better and better training lose sight of the man himself and his spirituality, which alone can give us the faith men live by.



# Maryland

## SOCIETY OF PATHOLOGISTS INC.

PAUL F. GUERIN, M.D., *President*

ROBERT D. SOLOMON, M.D., *Secretary*  
Sinai Hospital, Baltimore 5, Md.



### PREOPERATIVE CLOTTING TIMES AND BLEEDING TIMES—ARE THEY ADEQUATE?

In many hospitals a Lee-White clotting time and a bleeding time serves as a routine screening procedure for hemorrhagic disorders. These tests are insensitive. Only the severe hemophiliac or thrombocytopenic patient will be detected with these methods. In most instances these dyscrasias will be obvious from the history. Of even more importance is the fact that many hemorrhagic disorders which are completely missed with these routine tests could have been diagnosed or at least suspected had a careful history been obtained.

What then is the best preoperative screening procedure for a hemorrhagic tendency? **Nothing can replace a good history!** If, from the history, a hemorrhagic tendency is suspected, then a platelet count, silicone clotting time, thromboplastin generation test and prothrombin time are the tests most likely to define the nature of the disorder. The following will serve as a guide to their interpretation:

| Coagulation Stage | Defect  | Test   |
|-------------------|---|--|
| First             | Hemophilia<br>Hemophilioid States<br>Circulating Anticoagulants<br>Thrombocytopenia | Silicone clotting time<br>Thromboplastin generation<br>Prothrombin consumption<br>Platelet count |
| Second            | Parahemophilia and other<br>Accelerator Deficiencies:<br>Hypoprothrombinemia        | One stage Quick Prothrombin time   |
| Third             | Fibrinogenopenia  | Failure of plasma clot to form on addition of thrombin<br>Quantitative fibrinogen                |
|                   | Fibrinolysis  | Sterile blood or plasma clot dissolution on 24 hour incubation                                   |

From a practical standpoint it is important to recognize *thrombocytopenia*: if idiopathic it may respond to ACTH, steroids or splenectomy; if drug induced, it may respond to withdrawal of the drug; or it may be indicative of another hematologic disorder such as aplastic anemia or leukemia. Recognition of *hypoprothrombinemia* or accelerator deficiencies is of practical value since they may yield to administration of Vitamin K<sub>1</sub> oxide. The recognition of puerperal or postoperative *fibrinogenopenia* is important because substitution therapy may be effective.

Even if the specific clotting defect cannot be identified, it is nevertheless important to recognize the presence of any bleeding tendency prior to surgery so that adequate amounts of fresh blood may be available. To do this one must start with a good history and treat the patient rather than "treat the physician" with insensitive tests.



# The Heart Page

Gordon Walker, M.D. - Coeditors - Robert Singleton, M.D.

A SERVICE OF

THE HEART ASSOCIATION OF MARYLAND

## RE-EVALUATION OF THE "LOW SALT SYNDROME"

W. GORDON WALKER, M.D.

The evolution of the physician's attitude toward the significance of variations in the serum sodium concentration in congestive heart failure has probably been influenced more by unhappy experiences than by an understanding of the underlying disturbances responsible for these variations. The recognition that low serum sodium values were associated usually with progressive intensification of the clinical manifestations of heart failure was responsible for a period of enthusiastic attempts at correction of this abnormal laboratory finding. Unfortunately the results were most often quite discouraging. Usually the administration of salt resulted only in increased thirst, excessive water intake and, consequently, further lowering of the serum sodium concentration with increase in the marked edema already present.

Using isotope dilution procedures to measure total body sodium and water, it has been shown in patients with chronic congestive failure that both total body sodium and water are increased very considerably beyond the normal range; the latter very often showing a proportionately greater increase (1). While the mechanism for these disparate increases is unclear, the significant fact is that the total quantity of sodium ion is always increased in this situation. Hence it seems misleading to speak of a "low salt syndrome" when a low serum sodium concentration is found in congestive heart failure with edema.

The recently reported studies of Edelman and others (2) failed to demonstrate any correlation between the serum sodium concentration and the

total exchangeable sodium as measured by isotope dilution in patients with heart failure and edema. These workers also made simultaneous measurements of total body water and total body potassium. A significant negative correlation was shown between serum sodium concentration and the total body water in edematous patients; i.e., the greater the total body water, the lower the sodium concentration. Their data support the concept that excess water retention is responsible for lowering of the serum sodium concentration and that the term dilution hyponatremia is more appropriate. Thus, more attention should be focused on water balance in this situation.

Weston and others have recently reported several well studied cases of severe congestive failure with hyponatremia (3). The central feature in these cases was the steady accumulation of a positive water balance as the hyponatremia became more marked, and conversely a water diuresis and net negative water balance was associated with a rise in the serum sodium concentration to normal levels. This was not associated with any significant changes in sodium balance. In all cases this water retention and the development of hyponatremia was associated with worsening of the clinical features of the congestive failure, and the water diuresis and rise in serum sodium concentration followed improvement in the cardiovascular status and clinical improvement in the signs and symptoms of failure. Thus it appears that in the presence of severe congestive failure the kidneys are unable to get rid of a water load.

It is unclear whether this water retention is the result of some disturbance in the antidiuretic hormone regulatory mechanism or some other abnormality still to be elucidated. However, in view of the studies referred to above, *water restriction* and vigorous attempts to improve cardiovascular function



(by adequate digitalization, diuretics, control of arrhythmias, etc.) constitutes a more rational therapeutic regimen than the administration of sodium chloride.

*The Johns Hopkins Hospital  
Baltimore 5, Maryland*

## REFERENCES

1. FARBER, S. J. AND R. J. SOBERMAN. *J. Clin. Invest.*, **35**: 779, 1956.
2. I. S. EDELMAN, J. LEIBMAN, M. P. O'MEARA, AND L. W. BIRKENFELD. *Jour. Clin. Investigation*, **37**: 9, 1236, 1958.
3. RAYMOND E. WESTON, JACOB GROSSMAN, E. RAYMOND BORUN, AND IRWIN B. HANENSON, *Am. Jour. Med.*, **25**: 4, 558.

## EIGHTH ANNUAL PEDIATRIC SEMINAR

April 5, 1959—University Hospital

- 10:00-10:05 a.m. WELCOME. DR. J. EDMUND BRADLEY, Professor of Pediatrics, University of Maryland.  
MODERATOR. DR. RAYMOND L. CLEMMENS, Associate in Pediatrics, Director, Central Evaluation Clinic for Children, University of Maryland.
- 11:05-11:00 a.m. FOOD, GROWTH AND RENAL FUNCTION IN THE EARLY DAYS OF LIFE. DR. ELSIE M. WIDDOWSON, Assistant Director of the Department of Experimental Medicine, University of Cambridge, England.
- 11:00-11:30 a.m. DISCUSSION.  
MODERATOR. DR. FRED R. MCCRUMB, Assistant Professor of Medicine, Director, Infectious Diseases, University of Maryland.
- 11:30 a.m.-  
12:30 p.m. INFECTIOUS HEPATITIS: CLINICAL ASPECTS AND PREVENTION. DR. SAUL KRUGMAN, Associate Professor of Pediatrics, New York University College of Medicine.
- 12:30-1:00 p.m. DISCUSSION.  
1:00-2:00 p.m. LUNCH will be served in the auditorium on the fifth floor.  
MODERATOR. DR. KURT GLASER, Assistant Professor of Pediatrics, Director, Mental Hygiene Clinic for Children, University of Maryland.
- 2:00-3:00 p.m. THE MANAGEMENT OF COMMON BEHAVIOR DISORDERS. DR. HARRY BAKWIN, Professor of Clinical Pediatrics, New York University, Bellevue Medical Center.
- 3:00-3:30 p.m. DISCUSSION.  
MODERATOR. DR. JOHN CASIMIR OZAZEWSKI, Acting Head, Department of Ophthalmology, University of Maryland.
- 3:30-4:30 p.m. COMMON DISEASES OF THE EYE ENCOUNTERED BY THE PEDIATRICIAN IN HIS OFFICE PRACTICE. DR. ARNALL PATZ, Instructor in Ophthalmology, Johns Hopkins Medical School.
- 4:30-5:00 p.m. DISCUSSION.



# Blue Cross - Blue Shield



## THE JOINT COMMITTEE ON THE USE OF HOSPITAL FACILITIES

DENWOOD N. KELLY\*

During the Blue Cross rate hearing last May there was a great deal of discussion about the "improper" utilization of hospital facilities. A number of people, both physicians and laymen, testified that they thought there was outright "abuse" of Blue Cross, as well as insurance companies, by patients who succeeded in being hospitalized in order to get various diagnostic tests performed at no direct cost to themselves. There were also charges that many hospitals did not properly schedule certain procedures and tests, this resulting in unnecessary days of bed occupancy while patients were waiting to have these services performed. Probably a better descriptive term for this entire problem would be "uneconomical use of hospital facilities."

A partial approach to the solution of this problem might be the provision of benefits for many of these diagnostic services when performed in either doctors' offices or hospital outpatient departments. The Honorable Charles S. Jackson, insurance commissioner of Maryland, requested Blue Cross to study this problem and submit to him recommendations for such a program. We are concluding our study of this problem with Blue Shield and hope to make a specific proposal to the insurance commissioner soon.

Mr. Jackson also requested hospitals and doctors to make every effort to control the use and cost of hospital care. At the suggestion of Blue Cross there has been formed The Joint Committee on the Use of Hospital Facilities. Its initial membership consists of the five medical members of the Blue Cross board of directors, the Plan's medical director, and a committee of physicians from the medical staff representatives to the Hospital Council. At its initial meeting, the committee decided to increase its membership by requesting the services of several additional physicians from the counties so that there would be

adequate geographical representation throughout the state. Dr. C. Reid Edwards was elected chairman of the committee. He immediately requested the cooperation of hospitals and medical societies throughout the state. In a letter to the chief of staff of each hospital and to the president of each county medical society, Dr. Edwards summarized the purposes and initial plans of the committee. One paragraph of this letter is of such importance that it bears verbatim quotation:

"This is a most difficult and complex problem. You may logically inquire why the committee is composed only of physicians. It is not intended that physicians be called upon to interpret or police the Blue Cross contract, or to make the final decisions on contractual provisions relating to Blue Cross coverage. It may be that the committee will recommend certain changes in the Blue Cross contract as a means of effecting better control on the use of hospital facilities. But in the final analysis full cognizance must be given to the fact that the admission of a patient to a hospital, as well as the use of services while hospitalized and the length of stay, are primarily matters of medical judgment. In all its basic elements, the total provision and use of hospital facilities is determined and controlled by doctors. This is our responsibility and it must not be delegated. However, if our total use of today's expensive hospital facilities cannot be fully justified on medical grounds, then Blue Cross and the public have real cause for concern, and we have a real obligation to review, and possibly revise, our present practices."

As the committee goes more deeply into the problem, it will review data supplied by both Blue Cross and the Hospital Council, as well as other sources. Undoubtedly it will have recommendations to make to Blue Cross, to hospital administrators, to hospital medical staffs, and to individual doctors. Only through the cooperation of all of us can any real result be achieved.

One thing must always be remembered: The proper use of hospital facilities is not just a matter of selfish interest to Blue Cross; it is of prime importance to the entire community.

\* Assistant Director, Maryland Blue Shield Plan.



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# Health Department

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## BALTIMORE CITY HEALTH DEPARTMENT

### Notes From Baltimore's Health Record For 1958

Important items in the general descriptive report on Baltimore's health for 1958 are those describing changes in the city's population makeup and the summary for the year's record. These texts are as follows:

#### POPULATION

Censuses which were taken in the past three years in New York City and in the District of Columbia provide evidence that the populations in these central cities of important metropolitan areas are declining. These findings, as well as a wide range of data, are carefully reviewed by the Bureau of Biostatistics in estimating population changes in Baltimore City.

The number of residents of Baltimore City on July 1, 1958 was estimated as 982,000, an increase of 3,000 when compared with the 1957 estimate of 979,000. Once again the number of white residents declined; from 688,000 in 1957 to 681,000 in 1958, a loss of one per cent annually. Offsetting this trend, which has been continuous since the end of World War II, the number of colored residents has increased in a spectacular manner. In 1958, the Negro population was estimated at 301,000, up 10,000 from the figure of 291,000 in 1957, and 75,000 greater than the 1950 colored population as enumerated by the Bureau of the Census. Two predictions appear reasonable at this time: The total city population will stabilize at approximately the present level. The Negro population will grow at a rate not less than two and one-half per cent annually while the white population declines in numbers equal to the numerical increase in Negro residents.

It has been customary to regard the eventual population of Baltimore City as being somewhere between 1,150,000 and 1,250,000 residents. This "target" seems exaggerated at this time. The net effect of redevelopment is to reduce the number of dwelling units in the city. Rehabilitation, if effective, should

reduce density. Changing patterns of land usage are resulting in a significant reduction of residential units through conversion for commercial occupancy. It is reasonable to expect that the population when next enumerated by the Bureau of the Census in 1960 will not exceed 1,000,000. Those agencies, government, commercial, health and welfare, which are concerned with services to residents of the city will need to accustom themselves to the concept of a stable rather than a growing population, although the changing geographic distribution and the age, racial, social and economic composition of the community will still demand unusual ingenuity and flexibility in administrative planning.

Without question the dominant demographic event in this city is the emigration by native white Baltimore residents to Baltimore and Anne Arundel Counties and their replacement by colored residents, either through immigration or by natural growth, and by white immigrants from the South. The relatively depressed economic level of the expanding colored population results in an increase of persons in need of such public services as aid to dependent children and of publicly supported hospital and public health services, and requires an increase in police and other crime control activities.

It is a challenge to responsible civic minded groups to determine how such depressed groups can be supported so that the younger generations now growing in deprived environments can reach a level of productive adulthood. Certainly the exceptional public financial burden these groups represent should be equitably distributed across a broader population base than the city itself.

#### SUMMARY

Adverse factors affecting the health of residents of Baltimore City in 1958 included, a high rate of respiratory disease and increased death rate from pneumonia early in the year, and a poor record in connection with the survivorship of babies of premature birthweight. Several areas of progress included the attainment of record low levels in the incidence of whooping cough and typhoid and a 12 per cent decline in newly reported active tuberculosis cases.

The changing social and economic character-

istics of the population is a matter for great concern since it inevitably results in marked need for expansion of prenatal, well baby, and school health services.

The challenge of providing Baltimore with a comprehensive plan to prevent mental illness in an aggressive manner among its residents was accepted as a major responsibility of the City Health Department and concrete steps were undertaken in 1958 towards meeting its obligations in this regard.

The complete report was prepared by Dr. Matthew Tayback, assistant commissioner of health for research and planning in the City Health Department and was released by the commissioner of health.

*Huntington Williams, M.D.*

*Commissioner of Health*

#### PRINCIPLES OF PRACTICE\* OF THE AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION

I affirm my devotion to the service of humanity and will do everything I can to merit the confidence and sacred trust of my patients. My responsibility to my patient is my first obligation.

I affirm my adherence to the "Principles of Medical Ethics" of the American Medical Association and my determination to practice the profession of medicine and the specialty of physical medicine and rehabilitation in accord with them.

I will stand ever ready to make available my skills, services, and knowledge to my colleagues and will cooperate with them so that advances in medical knowledge particularly in physical medicine and rehabilitation will be available to them and their patients.

I affirm my obligation to do my utmost to protect the profession, the specialty of physical medicine and rehabilitation, and the public against physicians deficient in moral character or professional competence.

I affirm that upon undertaking the care of a patient I shall not neglect him or discontinue my care without giving adequate notice.

I am free to choose whom I shall serve, but I will not solicit.

I will not dispose of my services under terms or conditions which hinder or impair the free and complete exercise of my independent medical judgment and skill;  
cause deterioration of the quality of medical care, and  
permit the sale of my services by any hospital, corporation, rehabilitation center, or lay body, by whatever name called or however organized, not licensed to practice medicine.

I will not solicit nor accept a position which is occupied by another physiatrist without first consulting with that physiatrist.

I will not divide fees for professional medical services performed by me directly or indirectly with any other person.

I will not participate, directly or indirectly, in any program contrary to law or in any program for the rendering of professional medical services which is not under the direction and supervision of a licensed doctor of medicine.

\* Adopted August 28, 1958 during the 36th annual session of the American Congress of Physical Medicine and Rehabilitation.





## MARYLAND TUBERCULOSIS ASSOCIATION

*Christmas Seal Agency for State of Maryland*

900 ST. PAUL STREET

BALTIMORE 2, MARYLAND

### CASE FINDING IN PULMONARY TUBERCULOSIS

MOSES S. SHILING, M.D.\*

Because of the magnitude of the tuberculosis problem in Baltimore, it seems important to review the subject of case finding in pulmonary tuberculosis. Various techniques have professional and community acceptance, but the zeal and enthusiasm in their application leave much to be desired.

This communication will concern itself with (1) the techniques of case finding, (2) the groups involved in administering the above techniques, and (3) the segments of the population who are to be the recipients of the above studies.

Case finding in tuberculosis involves putting into practice the old aphorism that early tuberculosis must be seen and not heard; thus the one single best method of discovering pulmonary tuberculosis is by use of the X-ray.

Depending on the number of individuals to be X-rayed, varying methods of X-ray visualization may be employed. With large groups of the population to be X-rayed, the standard 14x17 technique is too slow and too costly. Here photofluorography is the method of choice. With these machines one can take over 100 films an hour. The resolving power of the photofluorographic system leaves nothing to be desired when compared with the standard 14x17 films. At present photofluorography is considered a screening procedure and present technique requires confirmation of any abnormal findings with a large film.

At this point it might be worth while taking up the question of radiation hazard, both to the patient and to the doctor, in the course of case finding in pulmonary tuberculosis. At present fluoroscopy of the chest is frowned upon because of its potential radiation hazard. Photofluorography also exposes the patient to more radiation than he would get from the use of standard X-ray equipment. However, the

actual measured amount of radiation received by the individual from properly operated photofluorographic machines is indeed very small, and all authorities still recommend surveys when the yield of cases is as great as those found in Baltimore.

X-rays could be restricted to those giving a positive reaction to the intermediate strength PPD tuberculin test. (The patch test is no longer recommended.) This technique may work well in a captive population, such as a school, but has limited value when applied to the general population. As an epidemiologic tool, there is no question about the value of tuberculin testing, but in case finding in this area, I suggest that the technique cannot replace X-ray. As a positive suggestion in case finding, one could use the tuberculin test on children and on pregnant women in the early months of pregnancy, and in private office practice.

If the techniques in case finding have value and merit, who are to use them? Every city health department chest clinic has the equipment to take both photofluorographs and standard 14x17 films. The Bureau of Tuberculosis also operates one mobile and one transportable photofluorographic unit for mass X-ray surveys. The Maryland Tuberculosis Association has a photofluorographic unit open to the public. These services must have professional as well as public acceptance as attested by the number of physicians referring patients and also by the number of individuals appearing for this examination. In Baltimore a very few industries routinely screen all preemployment applicants by either standard 14x17 films or by using photofluorographic technique. The office of the private physician should be the greatest source for case finding in tuberculosis, using the private or public consultation services mentioned above.

The general hospital should play an important role in case finding in tuberculosis. By routinely X-raying all hospital admissions no matter what the admission diagnosis, the yield of tuberculosis is high, as much as three times the yield from commun-

\* First Vice President, Maryland Tuberculosis Association.

ity surveys. This procedure has the blessing of all the official agencies involved, but in spite of this approval, very few hospitals in Baltimore use the technique. Why we have failed is difficult to understand, but there is no doubt that progress must be made. If one envisages the hospital as a community health center, the hospital photofluorographic unit could be made available to the practitioners in the neighborhood of the hospital. Facilities must also be made available to our penal institutions and mental institutions for routinely X-raying all their admissions, for the yield in these groups is very high.

Let us now consider priorities for segments of the population that need to be examined. Numerous studies have revealed that one can expect the great-

est yield in the low income and non-white groups. The Maryland Tuberculosis Association calls on community organizations, church groups, housing project associations, and PTA's to help in planning for successful surveys. Industries with a high percentage of males, particularly older white males, should be surveyed at frequent intervals. School and recreational department personnel should also be surveyed. Contacts of newly-discovered cases of tuberculosis yield a respectable number of new cases of the disease.

In summary, one might state that although all techniques in case finding in pulmonary tuberculosis are used in our community, unfortunately they are used by too few doctors on too few patients.

#### PEDIATRICS SHORT COURSES

A series of short refresher courses in pediatrics has been scheduled by the Children's Hospital of Philadelphia and the graduate School of Medicine, University of Pennsylvania.

##### May 25-29, 1959 PEDIATRIC ADVANCES

The curriculum will consist of clinics, demonstrations and panel discussions in selected aspects of contemporary pediatrics in which important advances are being made. It will be conducted by the staff of the Children's Hospital of Philadelphia. Interested physicians are urged to apply early since total attendance is limited. The fee is 115 dollars, which will be refunded if the registrant later finds he cannot attend.

##### June 1-5, 1959 PRACTICAL PEDIATRIC HEMATOLOGY

These sessions will be conducted by Irving J. Wolman, M.D., Thomas R. Boggs, Jr., M.D. and other members of the Hematology Department of the Children's Hospital of Philadelphia. The tuition is \$125.00. Physicians may register for the last two days, only, if desired. The program on June 4 and 5 will be devoted to Problems of Blood Grouping and will cost 50 dollars.

Further information may be obtained from Irving J. Wolman, M.D., Director of Post-Graduate Education, The Children's Hospital of Philadelphia, 1740 Bainbridge Street, Philadelphia 46, Pennsylvania.



## THE MARYLAND ACADEMY OF GENERAL PRACTICE

(A constituent chapter of the American Academy of General Practice)

**President:**  
J. ROY GUYTHER, M.D.  
Mechanicsville, Md.  
**Vice President:**  
WILLIAM T. LAYMAN, M.D.  
Hagerstown, Md.  
GORDON M. SMITH, M.D.  
Barnesville, Md.  
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ANDREW C. MITCHELL, M.D.  
Salisbury, Md.  
**President-elect:**  
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**Treasurer:**  
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4116 Edmondson Avenue  
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**Secretary:**  
CHARLES P. CRIMY, M.D.  
2722 E. Monument Street  
Baltimore 5, Md.  
**Executive Secretary:**  
WILLIAM J. WISCOTT, M.D.  
3722 E. Greenmount Ave.  
Baltimore 18, Md.



In last month's issue of this *Journal*, an explanation of the aims of the Academy of General Practice was given. One of the aims is "to promote the science and art of medicine and surgery and the betterment of the public health." This is not just so many words. To carry out this aim the Maryland Academy proposes to take the lead in an effort to finish the polio vaccination program.

It is recognized that there is a large residue of persons under 40 years of age who have not completed the series of three immunizations. Intensive campaigns by local communities for vaccinations will be necessary. The AMA's House of Delegates at Minneapolis recommended that "each physician assume responsibility for making sure that all members of families he sees are fully vaccinated." The Academy believes that every physician's office should be an immunization center. Members of the Academy recognize that failure to successfully complete this campaign will make it necessary for public health authorities to sponsor clinics for the purpose.

Many persons gravitate to public clinics in the mistaken belief that they are getting "something for nothing." They should recognize that the public health personnel who staff these clinics, the materials utilized, and the vaccine that is given are all paid for from taxpayers' monies. The costs are there, but hidden.

One advantage to the individual of receiving his immunizations from his personal physician is that the family doctor knows what has been administered, keeps the records, and when illness of any nature strikes, has available information to help in the intelligent management of his patient. Such reasoning is typical of the Academy of General Practice.

Further information on membership in the Maryland Academy may be obtained from Archie R. Cohen, chairman of Membership Committee, Clear Spring, Maryland.

### NEW OFFICERS AND DIRECTORS—1959

**President**  
**President-elect**  
**Secretary**  
**Treasurer**

DR. J. ROY GUYTHER  
DR. WALTER A. ANDERSON  
DR. CHARLES P. CRIMY  
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#### *Vice Presidents*

Western Maryland  
Southern Maryland  
Baltimore City  
Eastern Shore

DR. WILLIAM T. LAYMAN  
DR. GORDON M. SMITH  
DR. JOSEPH S. BLUM  
DR. ANDREW C. MITCHELL

#### *Delegates to American Academy of General Practice*

DR. ARCHIE R. COHEN—Alternate, Term Expires 1959  
DR. DONALD BARTLEY, Term Expires 1959  
DR. J. ROY GUYTHER—Alternate, Term Expires 1960  
DR. NATHAN NEEDLE, Term Expires 1960

#### *Directors*

Eastern Shore  
DR. DONALD BARTLEY, Term Expires 1959  
Baltimore City  
DR. MELVIN BORDEN, Term Expires 1959  
DR. AARON SOLLID, Term Expires 1960  
Western Maryland  
DR. MARTIN ROTHSTEIN, Term Expires 1959  
DR. SIDNEY NOVENSTEIN, Term Expires 1960  
DR. STEPHEN R. ANDREWS, Term Expires 1960  
Charles County  
DR. ARTHUR O. WOODY, Term Expires 1960  
Southern Maryland  
DR. ROBERT MCCENY, Term Expires 1959

#### *Chairman of Board of Directors*

#### *Executive Committee*

DR. J. ROY GUYTHER, chairman  
DR. MELVIN BORDEN  
DR. CHARLES P. CRIMY  
DR. HARRY L. KNIPP  
DR. DONALD BARTLEY  
DR. MARTIN ROTHSTEIN

#### *Executive Secretary*

MR. WILLIAM J. WISCOTT

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# Maryland Chapter American College of Surgeons

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## SECOND ANNUAL MEETING

OTTO C. BRANTIGAN, M.D., *Secretary*

The Maryland Chapter of the American College of Surgeons held its second annual meeting on September 20, 1958, at Hershey, Pa. According to all members attending, it was considered a highly productive and gratifying meeting.

Excellent scientific presentations were made by Dr. Donald B. Benson and Dr. Frank C. Spencer on the "Surgical Management of Chest Trauma." Dr. Arthur L. Haskins gave an excellent discussion on the "Indications and Contraindications of Oophorectomy."

Reports of the various committees were read and discussed at length. Several resolutions were made and defeated after spirited discussion. As a result of the work of the insurance committee, Mr. William L. McKechney spoke to the membership concerning the malpractice insurance as recommended by the American College of Surgeons. A standard insurance form was presented by the insurance committee and was accepted.

The following resolutions were adopted by the membership:

1—"It is believed that practicing physicians can materially aid in the governing and management of hospitals and should therefore be accepted as members of the governing board of hospitals. The board of regents of the American College of Surgeons is respectfully requested to consider the question and approve the principle set forth. If this policy is adopted by the American College of Surgeons, there is little doubt about its acceptance throughout our country."

2—"The American College of Surgeons, since its founding, has led our nation in its overall efforts to

improve the quality of patient care. For many years, as one of these efforts, the College carried out a superb program of hospital standardization and accreditation. In recent times, while retaining its interest in these matters, it has delegated the execution of the program to the Joint Commission on Accreditation. Recent actions of this Joint Commission on Accreditation have raised doubts in the minds of the members of the Maryland Chapter of the American College of Surgeons as to whether or not the primary purpose of improving standards of patient care is being properly served. It appears to the members of the Maryland Chapter of the American College of Surgeons that the Joint Commission on Accreditation has been unduly arbitrary in some of its decisions and has made recommendations which would, if followed to the letter, succeed in raising the cost of medical care without ensuring any improvement in the quality of that care. The Maryland Chapter of the American College of Surgeons, therefore, urges that its parent organization, the American College of Surgeons, and in particular, The Board of Governors, carefully investigate the activities of the Joint Commission on Accreditation. In addition, the suggestion is made that reports submitted by inspectors after visiting local hospitals be studied jointly by the Joint Commission on Accreditation and a statewide committee in each instance (similar to the State Credentials Committee), final recommendations regarding accreditation to be agreed upon jointly by these."

The following officers were elected:

*President:* James S. O'Hare, M.D.

*Vice-President:* Howard F. Kinnamon, M.D.

*Council Member:* Donald B. Grove, M.D.

A dinner-dance was the climax of a wonderful meeting.





# Woman's Auxiliary Medical and Chirurgical Faculty



MRS. DAVID S. CLAYMAN, *Auxiliary Editor*

## COMMUNITY SERVICE

MRS. JOHN O. ROBBEN

*Community Service Chairman*

One of the most important continuing efforts of the Woman's Auxiliary of the American Medical Association is community service—through both education and action. There is a great need for health education and services in every community.

In order to focus attention upon the magnitude of this endeavor, our national president, Mrs. E. Arthur Underwood, has requested that a special effort be made to tabulate the number of hours given by members to civic groups and voluntary and official health agencies. Each of the county chairmen has been sent report forms which we sincerely hope will be completed by you and returned to your chairman. At a later date we expect to publish the results of this information.

### 1. P.T.A.

Room Mother \_\_\_\_\_  
Health \_\_\_\_\_  
Cafeteria \_\_\_\_\_  
Ways & Means \_\_\_\_\_

### 2. Hospital Auxiliary

### 3. Hospital Volunteer

### 4. Red Cross

Gray Lady \_\_\_\_\_  
Sewing \_\_\_\_\_  
Motor Corps \_\_\_\_\_

### 5. Church

Sewing \_\_\_\_\_  
Fund raising \_\_\_\_\_  
Stewardship \_\_\_\_\_  
Foreign Missions \_\_\_\_\_  
National Missions \_\_\_\_\_

### 6. Women's Clubs

Welfare \_\_\_\_\_  
Civic \_\_\_\_\_

### 7. Scouting

### 8. 4-H Clubs

### 9. Homemakers Club

### 10. Civil Defense

### 11. Politics & Legislation

### 12. Charities

United Givers \_\_\_\_\_  
Tuberculosis \_\_\_\_\_  
Heart \_\_\_\_\_  
Polio \_\_\_\_\_  
Muscular Dystrophy \_\_\_\_\_  
Cerebral Palsy \_\_\_\_\_  
Diabetes \_\_\_\_\_  
Crippled Children \_\_\_\_\_  
American Cancer Society \_\_\_\_\_  
Mental Health \_\_\_\_\_  
Others \_\_\_\_\_  
Total \_\_\_\_\_

## ANNUAL MEETING OF WOMAN'S AUXILIARY

MRS. WILLIAM S. STONE

*Convention Chairman*

April 15, 1959

- 9 A.M. Registration at Sheraton Belvedere Hotel.
- 10 A.M. Meeting—Mrs. E. Roderick Shipley presiding. Installation of Mrs. D. Delmas Caples of Reisterstown as president.
- 12:30 P.M. Luncheon—Guest speaker; Mrs. Arthur Underwood of National. Representatives from New Jersey, Pennsylvania, Delaware, West Virginia as special guests.

## THIS MONTH WE SALUTE MRS. E. PAUL KNOTTS

Mrs. Knotts was born and lived in the shadow of the ancestral home of Nathaniel Potter, one of the founders of the University of Maryland Medical School, in the community of Williston, near Denton,

Md. She took her collegiate training at the Maryland College for Women at Lutherville.

She is married to E. Paul Knotts, a general practitioner in Denton. Besides her busy life as a doctor's wife, mother of two children, manager of farms bequeathed to her from descendants of colonial ancestors, she has found time to take part in community affairs as a member of the Woman's Club, the Memorial Hospital (Easton) Auxiliary, Caroline Historical Society, Rehoboth Art League, and church work in the First Methodist Church of Denton.

Mrs. Knotts was a member of the committee to draft a constitution and bylaws in the formation of the Auxiliary to the Medical and Chirurgical Faculty of Maryland in 1949. In 1950 she was a delegate of this group to the A.M.A. meeting in San Francisco. In 1952 she was chairman of the Doctors' Day Committee, the first observed in Maryland. In 1955 and 1956 she was vice president and chairman of the membership committee for members-at-large.

Once again this year Mrs. Knotts is serving as chairman of the committee for members-at-large. She has convinced 33 new members of unorganized counties to join. Auxiliary should be an important factor in the life of every doctor's wife and it certainly can be even more important in an unorganized county than in an organized one.

In spite of her busy life, Mrs. Knotts has found time to develop a few hobbies such as landscape gardening, grandchildren and antiques, all this in



MRS. E. PAUL KNOTTS

addition to doing a wonderful job for the Auxiliary to the Medical and Chirurgical Faculty. Hats off to Mrs. Knotts and her 33 new members at large.

*THE SECOND INTERNATIONAL SYMPOSIUM ON MYASTHENIA GRAVIS*

held under the joint auspices of

THE MYASTHENIA GRAVIS FOUNDATION, INC.

155 East 23rd Street

New York 10, N. Y.

and

THE NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

Bethesda 14, Maryland

April 18 and 19, 1959

Los Angeles, California

THE STATLER-HILTON HOTEL

This Conference will afford the 57 speakers from all of Western Europe, Canada, Soviet Russia and the United States an opportunity to present their current work, discuss mutual problems and enlist suggestions, thereby preventing duplication of efforts.

PHYSICIANS AND STUDENTS WELCOME  
THERE WILL BE NO REGISTRATION FEE

## Book Reviews

**Practical Dermatology**, George M. Lewis, M.D., F.A.C.P., W. B. Saunders Company, Philadelphia and London, 1959. 363 pages. Illustrated. \$8.00.

This is a concise, well illustrated text which will meet the needs of students even after they enter practice. It describes as succinctly as possible the clinical features and management of the more common skin disorders. Emphasis is centered on the means to accurate diagnosis and the selection of appropriate treatment.

**Long-Term Illness**, edited by Michael G. Wohl, M.D., F.A.C.P., W. B. Saunders Company, Philadelphia and London, 1959. 748 pages. Illustrated. \$17.00.

Seventy-nine authors contributed to this comprehensive survey of the management of the patient with prolonged illness. It represents the combined thinking and experience of many distinguished teachers and authorities in medicine and related fields. It is designed primarily for the practicing physician who maintains an interest in the total care of the patient with prolonged illness, for the medical student who is studying the chronic phase of disease, and for the rehabilitation worker. The first section deals with general principles of hospital and home care, with consideration of rehabilitation, psychologic problems, nursing procedures and multiphasic screening. The second section deals with the treatment of specific diseases.

**The Management of Fractures and Dislocations**, Anthony F. DePalma, M.D., W. B. Saunders Company, Philadelphia and London, 1959. Two volumes, 960 pages. Illustrated. \$35.00 set.

This work was undertaken to provide a comprehensive atlas of fractures and other joint injuries. It is depicted so that the essential characteristics of the lesions are readily recognized. Detailed methods of reduction, immobilization and post-reduction management are clearly visualized step by step. While the first part of Volume I deals with principles, the greater part of this volume and all of Volume II consider procedures.

**Vascular Surgery**, Geza de Takats, M.D., M.S., F.A.C.S., W. B. Saunders Company, Philadelphia and London, 1959. 726 pages. Illustrated. \$17.50.

This volume is a monograph of the personal experiences of the author and his group with vascular disease. In addition to surgical technique, it discusses the natural course of the disease as related to the whole patient.

**The Care of the Geriatric Patient**, Edited by E. V. Cowdry, Ph.D., Sc.D. (Hon.). The C. V. Mosby Company, St. Louis, 1958. \$8.00.

One of the significant developments in the first half of this century is the prolongation of the life span by approximately 18 years. In this book a number of international authorities interpret the significance of this phenomenon from various aspects. It is addressed primarily to the physician in the position of guide, philosopher and friend. It presents what is currently known about the practical, comprehensive care of geriatric patients and what can be done to meet their particular needs. The emphasis is on current information rather than on past developments or on help which may become available in the future.

**The Practice of Sanitation**, Edward Scott Hopkins and Wilmer Henry Schulze. The Williams & Wilkins Company, Baltimore, 1958. \$8.00.

Efforts toward increasing man's life expectancy have been exerted in many directions, and in no small measure in the field of environmental sanitation. Many human lives have been saved by the virtual elimination of insect, sewage or rodent borne diseases, such as malaria, typhoid, typhus and dysentery. Many more have been saved by measures to protect drinking water, disposal of sewage and the safeguarding of food. While this book does not provide detailed information on every feature of environmental sanitation, it does provide an easy reference for teachers, students, health officers and laymen on the techniques and mechanics of sanitation.



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## COMING MEETINGS

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### TV PROGRAMS, B.C.M.S.

Saturday, 5:00 to 5:30 P.M. WMAR-TV  
March 14 "Marriage Counseling" Mr. Hugo Bourdeaux  
March 28 "Air Pollution" Dr. Anna Baetjer  
April 11 "Backache" Dr. H. Alvan Jones

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### WOMAN'S AUXILIARY, B.C.M.S.

Wednesday, April 1, 1959 1211 Cathedral Street  
12:00 Noon Coffee and sandwiches  
1:00 P.M. Program

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### BALTIMORE CITY MEDICAL SOCIETY

Friday, April 3, 1959 8:30 P.M. 1211 Cathedral Street

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### RADIOLOGICAL SECTION, B.C.M.S.

Tuesday, April 21 5:30 P.M. Medical Residence Hall, Johns Hopkins Hospital

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### COMMITTEE FOR THE STUDY OF PELVIC CANCER

Meetings of this committee have been temporarily suspended due to unforeseen circumstances.

**THE TIME:** *Wednesday, Thursday and Friday, April 15, 16, and 17*

**THE PLACE:** *The Alcazar, Cathedral & Madison Sts., Baltimore, Md.*

**THE OCCASION:** *Annual Meeting of Medical and Chirurgical Faculty*